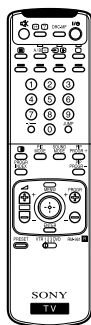


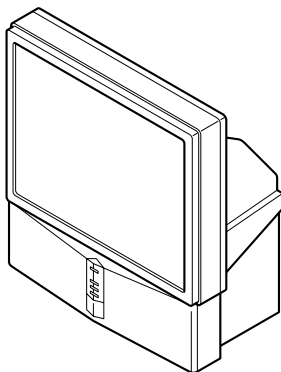
SERVICE MANUAL

RG-3 CHASSIS

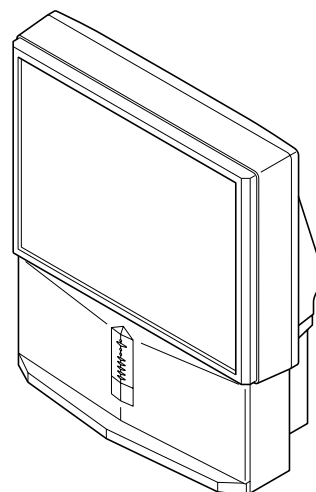
MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KP-ES43HK1	RM-961	HK	SCC-P45B-A	KP-ES53HK1	RM-961	HK	SCC-P45C-A
KP-ES43ME1	RM-961	ME	SCC-P46B-A	KP-ES53ME1	RM-961	ME	SCC-P46C-A
KP-ES43MN1	RM-961	GE	SCC-P44D-A	KP-ES53MN1	RM-961	GE	SCC-P44B-A
KP-ES43SN1	RM-961	AUS	SCC-P47B-A	KP-ES53SN1	RM-961	AUS	SCC-P47C-A
KP-ES48HK1	RM-961	HK	SCC-P45A-A	KP-ES61HK1	RM-961	HK	SCC-P45D-A
KP-ES48ME1	RM-961	ME	SCC-P46A-A	KP-ES61ME1	RM-961	ME	SCC-P46D-A
KP-ES48MN1	RM-961	GE	SCC-P44A-A	KP-ES61MN1	RM-961	GE	SCC-P44C-A
KP-ES48SN1	RM-961	AUS	SCC-P47A-A	KP-ES61SN1	RM-961	AUS	SCC-P47D-A



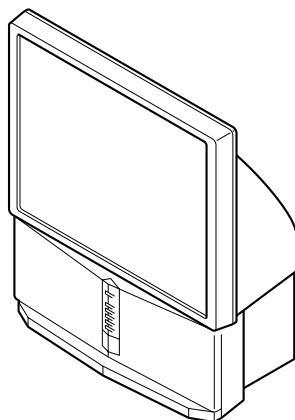
RM-961



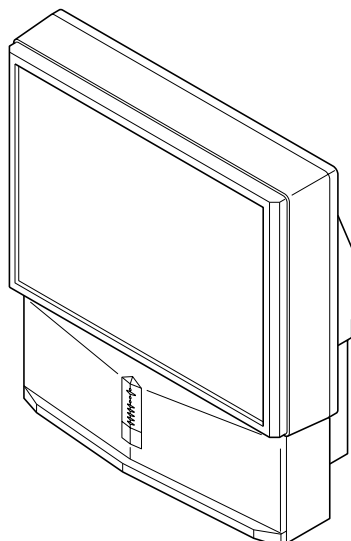
KP-ES43HK1/ME1/MN1/SN1



KP-ES53HK1/ME1/MN1/SN1



KP-ES48HK1/ME1/MN1/SN1



KP-ES61HK1/ME1/MN1/SN1

* Please file according to model size. ...☐

43 48 53 61

PROJECTION TV
SONY[®]

SPECIFICATIONS

	KP-ES61MN1/ KP-ES61HK1/ KP-ES61ME1/ KP-ES61SN1	KP-ES53MN1/ KP-ES53HK1/ KP-ES53ME1/ KP-ES53SN1	KP-ES48MN1/ KP-ES48HK1/ KP-ES48ME1/ KP-ES48SN1	KP-ES43MN1/ KP-ES43HK1/ KP-ES43ME1/ KP-ES43SN1
Projection system	3 picture tubes, 3 lenses, horizontal inline system			
Picture tube	7 inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquidcooling system			
Projection lenses	High performance, large-diameter highbrid lens F1.0			
Screen size	61 inches	53 inches	48 inches	43 inches
Television system	B/G, I, D/K, M			
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58			
Stereo/Bilingual system	NICAM Stereo/Bilingual B/G, I; A2 Stereo/Bilingual (German) B/G			
Channel coverage	VHF : E2 to E12 / UHF : E21 to E69 / CATV : S01 to S03, S1 to S41			
I	UHF : B21 to B68 / CATV : S01 to S03, S1 to S41			
D/K	VHF : C1 to C12, R1 to R12 / UHF : C13 to C57, R21 to R60 / CATV : S01 to S03, S1 to S41, Z1 to Z39			
M	VHF : A2 to A13 / UHF : A14 to A79/ CATV : A-8 to A-2, A to W+4, W+6 to W+84			
⏏ (Antenna)	75-ohm external terminal			
Audio output (Speaker)	13W + 13W, (10% distortion)			
Number of terminal				
📺 (Video)	Input: 4 Output: 1	Phono jacks; 1 Vp-p, 75 ohms		
🎵 (Audio)	Input: 4 Output: 1	Phono jacks; 500 mVrms		
📺 (S Video)	Input: 2	Y: 1 Vp-p, 75 ohms, unbalanced, sync negative C: 0.286 Vp-p, 75 ohms		
📺 (Component Video)	Input: 1	Phono jacks Y: 1 Vp-p, 75 ohms, sync negative C _B /B-Y: 0.7 Vp-p, 75 ohms C _R /R-Y: 0.7 Vp-p, 75 ohms Audio: 500 mVrms		
🔊	Output: 1	Phono jack; 500 mVrms		
🎧 (Headphones)	Output: 1	Stereo minijack		
Dimensions (w/h/d, mm)	1372 × 1542 × 661.5	1218 × 1423 × 623	1091 × 1336 × 580	966 × 1078 × 532
Mass (kg)	90	76	68	61

Power requirements	110 V – 240 V (For KP-ES61MN1/KP-ES53MN1/KP-ES48MN1/KP-ES43MN1/ KP-ES61ME1/KP-ES53ME1/KP-ES48ME1/KP-ES43ME1) 220 V – 240 V (For KP-ES61HK1/KP-ES53HK1/KP-ES48HK1/KP-ES43HK1/ KP-ES61SN1/KP-ES53SN1/KP-ES48SN1/KP-ES43SN1)
Power consumption (W)	270 W (For KP-ES61MN1/KP-ES53MN1/KP-ES48MN1/KP-ES43MN1/ KP-ES61ME1/KP-ES53ME1/KP-ES48ME1/KP-ES43ME1) 255 W (For KP-ES61HK1/KP-ES53HK1/KP-ES48HK1/KP-ES43HK1/ KP-ES61SN1/KP-ES53SN1/KP-ES48SN1/KP-ES43SN1)

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF HTE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1

SELF DIAGNOSIS FUNCTION

The unit in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.

The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

1-1. DIAGNOSTIC TEST INDICATORS

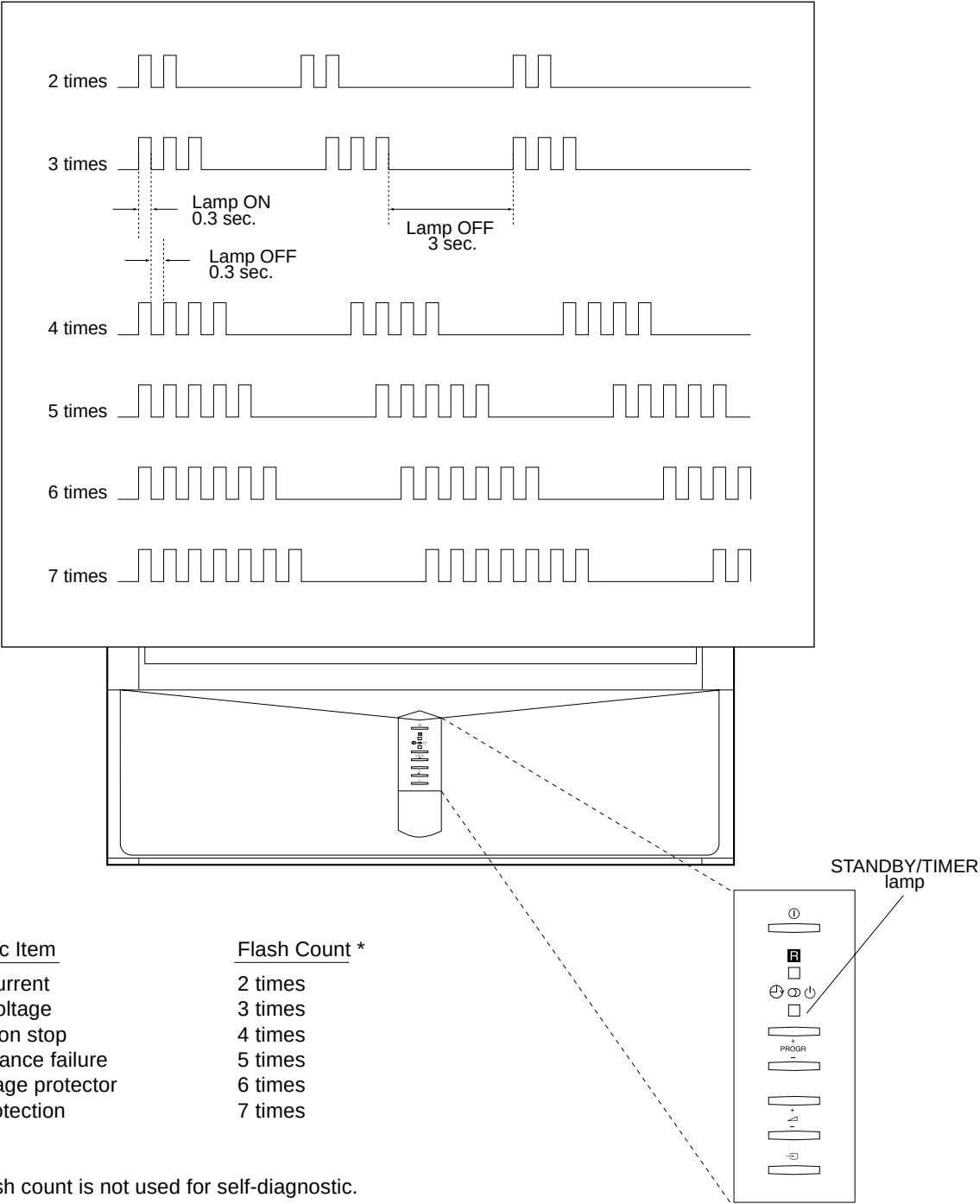
When an errors occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/ Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	_____	• Power cord is not plugged in. • Fuse (F6001) is burned out. (G, G1 board)	• Power does not come on. • No power is supplied to the PJ. • AC power supply is faulty.
• +B overcurrent (OCP)	2 times	002:000 or 002:001 ~ 255	• H. OUT Q5104 is shorted. • H. LIN Q5105 is shorted. (D board)	• Power does not come on. • Load on power line is shorted.
• +B overvoltage (OVP)	3 times	003:000 or 003:001 ~ 255	• IC6002 faulty. • 10.5 V is not supplied. (G, G1 board)	• Power does not come on.
• Vertical deflection failure	4 times	004:000 or 004:001 ~ 255	• V. OUT IC5302 faulty. • R5340 open • R5341 open (D board)	• Vertical deflection pulse is stopped. • Vertical size is too small. • Vertical deflection stopped.
• White balance failure (no PICTURE)	5 times	005:000 or 005:001 ~ 255	• G2 is improperly adjusted. (Note 1) • CRT problem. • Video OUT IC7101 (CR board), IC7201 (CG board), IC7301 (CB board) are faulty. • IC8306 (J1 board) and IC4301 (E board) are faulty. • No connection E board to CR board.	• No raster is generated. • CRT cathode current detection reference pulse output is small.
• High Voltage failure	6 times	006:000 or 006:001 ~ 255	• IC6301 (G, G1 bard) faulty.	• +135 V is too high.
• Audio Protection	7 times	007:000 or 007:001 ~ 255	• Power supply fails. • IC1101 (A1 board) faulty.	• There is picture but speaker does not release sound.
• Micro reset	_____	101:000 or 101:001 ~ 255	• Discharge CRT (CR, CG, CB boards) • Static discharge • External noise	• Power is shut down shortly, after this return back to normal. • Detect Micro latch up.

Note 1 : Refer to screen (G2) adjustment in section 4-2 of this manual.

1-2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



1-3. STOPPING THE STANDBY/TIMER FLASH

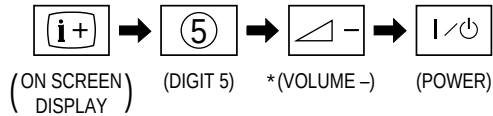
Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

1-4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurrences of failure for confirmation on the screen:

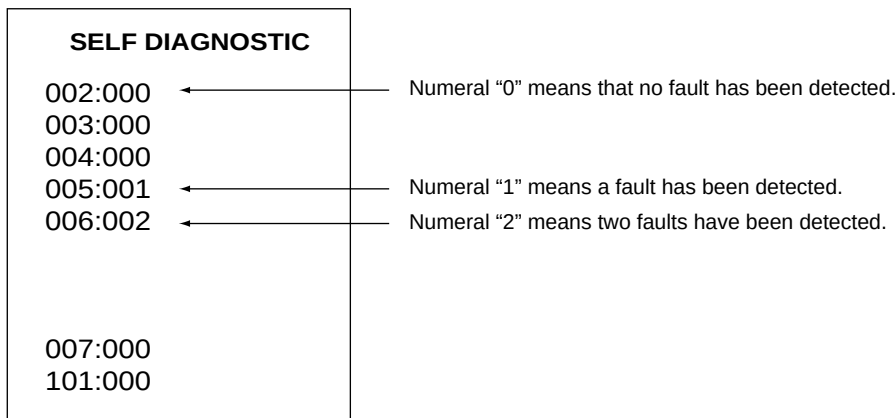
[To Bring Up Screen Test]

In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:



* : Note that this differs from entering the service mode (volume +)

Self-Diagnosis screen display



1-5. HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

[Clearing the result display]

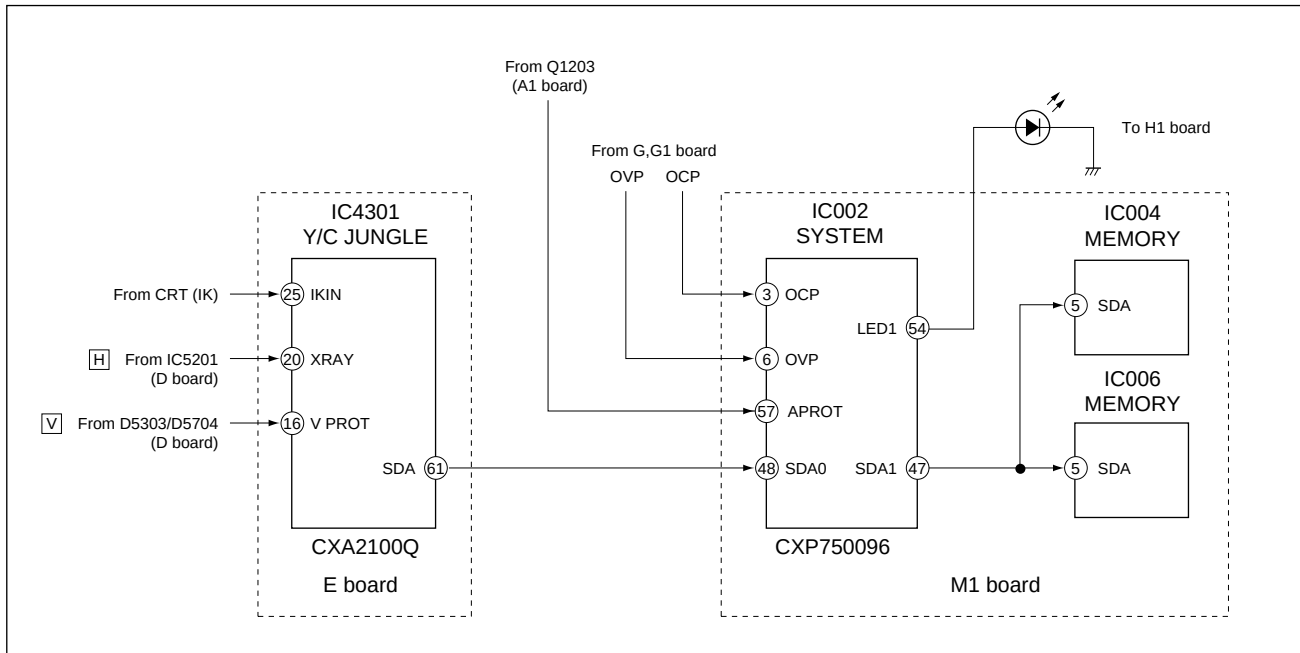
To clear the result display to “0”, press button on the remote commander sequentially as shown below when the diagnostic screen is being displayed.



[Quitting Self-diagnostic screen]

To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

1-6. SELF-DIAGNOSTIC CIRCUIT



+B overcurrent (OCP)	Occurs when an overcurrent on the +B (135 V) line is detected by Q6303. If Q6303 go to ON, the voltage to pin 3 of IC002 go to UP. The unit will automatically turn off.
+B overvoltage (OVP)	Occurs when an overvoltage on the +B (135 V) line is detected by D6318. If D6318 go to ON, then voltage to pin 6 of IC002 go to UP. The unit will automatically turn off.
Vertical deflection failure	Occurs when an absence of the vertical deflection pulse is detected by Q5302, Q5303, and D5303. Shut down the power supply.
White balance failure	If the RGB levels do not balance or become low level within 5 seconds. This error will be detected by IC4301. TV will stay on, but there will be no picture.
High voltage protector of Horizontal Deflection	Occurs when an overvoltage of horizontal pulse is detected by D5115 and IC5201. If the voltage of pin 1 of IC5201 goes to High, the voltage to pin 20 of IC4301 go to UP. The unit will automatically turn off.
Audio Protector	If the Audio out lines become DC. This error will be detected by Q1202, Q1204 and Q1203. The unit will automatically turn off.

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

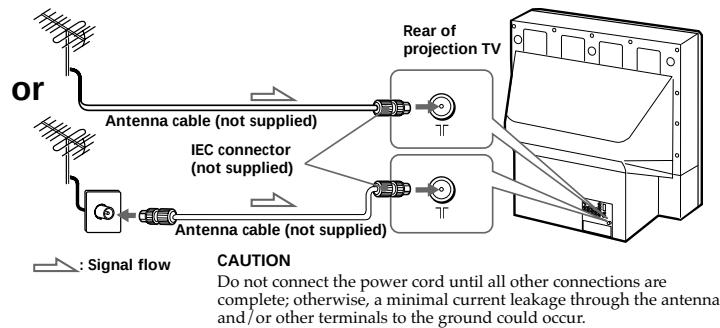
Using Your New Projection TV

Getting Started

Step 1

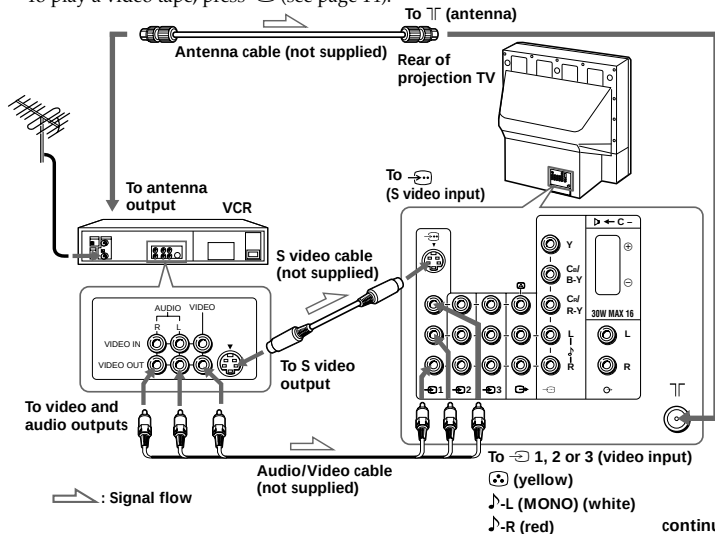
Connect the antenna

If you wish to connect a VCR, see the "Connecting a VCR" diagram below.



Connecting a VCR

To play a video tape, press (see page 14).



Using Your New Projection TV 5

SECTION 2 GENERAL

Getting Started (continued)

Notes

- If you connect a monaural VCR, connect the yellow plug to (the yellow jack) and the black plug to (MONO) (the white jack).
- If you connect a VCR to the (antenna) terminal, preset the signal output from the VCR to the program number 0 on the projection TV.
- When both the (S video input) and 1 (video input) are connected, the (S video input) is automatically selected. view the video input to 1 (video input), disconnect the S video cable.

Step 2

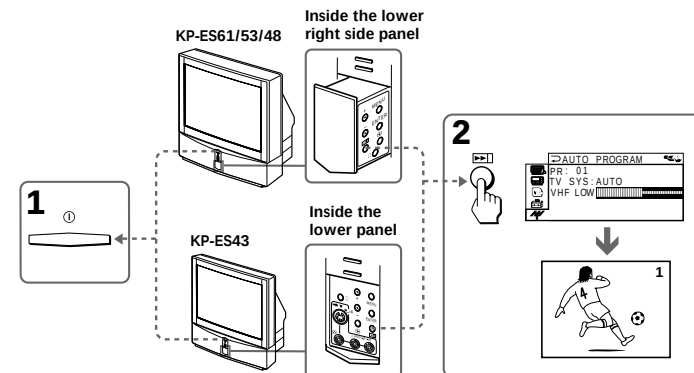
Insert the batteries into the remote

Notes

- Do not use old batteries or different types of batteries together.
- To operate some of the functions of your projection TV, you may have to open the remote control cover.

Step 3

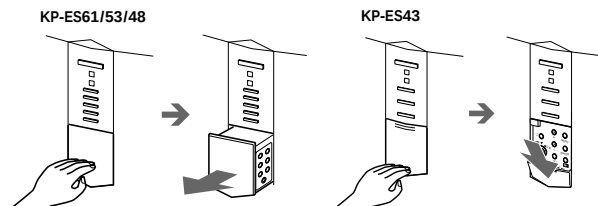
Preset the channels automatically



6 Using Your New Projection TV

Notes

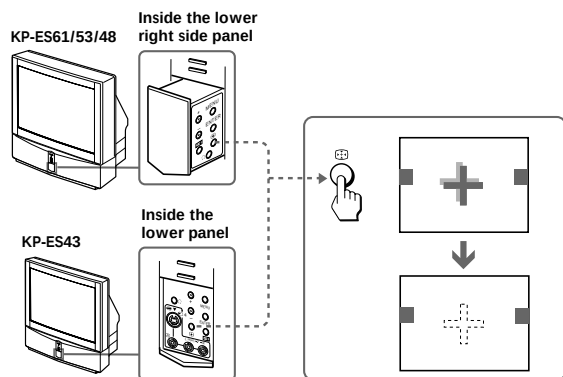
- To stop the automatic channel presetting, press MENU twice.
- If your projection TV has preset an unwanted channel or cannot preset a particular channel, then preset your projection TV manually (see page 44).
- To open the lower panel of your projection TV, push on it, then it will open.



Using Your New Projection TV

Step 4

Adjusting the convergence automatically



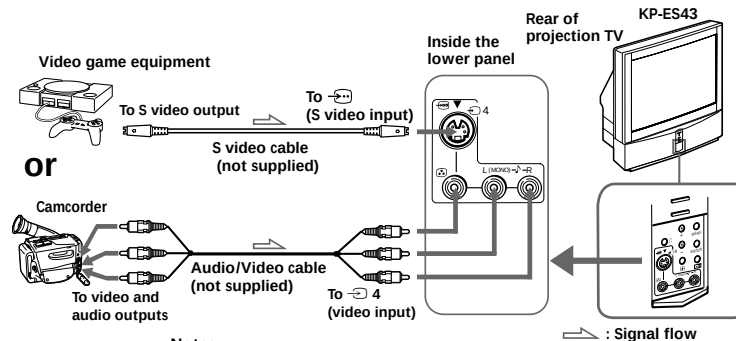
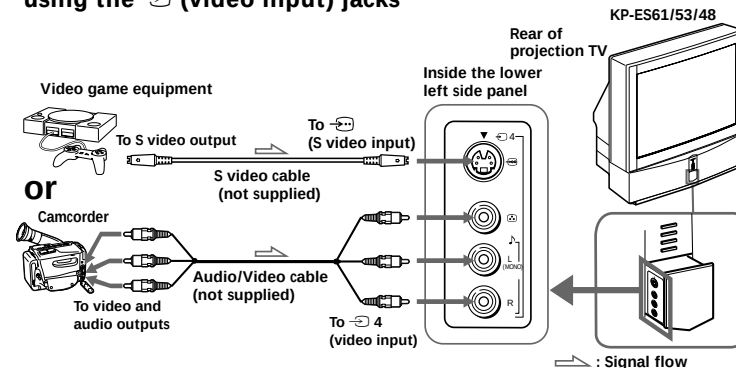
Note

- Adjust convergence about 20 – 30 minutes after the projection TV is first turned on.
The Digital Quick Focus feature allows you to adjust the convergence automatically.

Connecting optional components

You can connect optional audio/video components, such as a VCR, multi disc player, camcorder, video game, or stereo system. To watch and operate the connected equipment, see pages 14 and 28.

Connecting a camcorder/video game equipment using the (video input) jacks

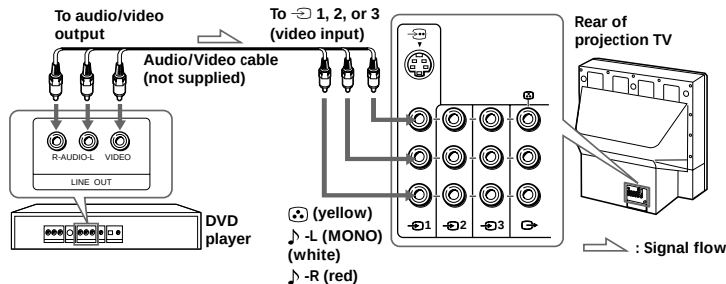


Notes

- When connecting video game equipment, display the "FEATURE" menu and select "ON" for "GAME MODE" to adjust the picture setting that is suitable for video games (see page 39).
- You can also connect video equipment to the 1, 2, or 3 (video input) jacks at the rear of your projection TV.
- When both the (S video input) and 4 (video input) are connected, the (S video input) is automatically selected. To view the video input to 4 (video input), disconnect the S video cable.

Connecting a DVD player to (video input)

Connect 1, 2, or 3 (video input) (audio/video) connectors on your projection TV to LINE OUT on your DVD player.

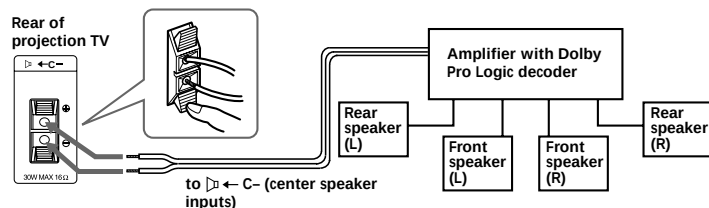


Notes

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness ("SHARP") under "PERSONAL ADJUST" in the "PICTURE MODE" menu (see page 34).
- Connect your DVD player directly to your projection TV. Connecting the DVD player through other video equipment will cause unwanted picture noise.

Connecting an amplifier with Dolby® Pro Logic decoder to C- (center speaker input)

Connect the speaker terminals on your amplifier to C- on your projection TV.



Note

- When making connection to C- on your projection TV set "SPEAKER: CENTER IN" in the "A/V CONTROL" menu. (see page 33)

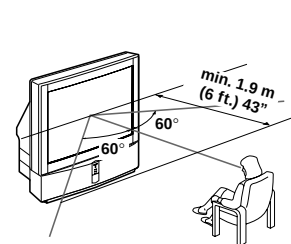
* Manufactured under license from Dolby Laboratories Licensing Corporation.
DOLBY, the double-D symbol and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

Installing the projection TV

For the best picture quality, install the projection TV within the areas below.

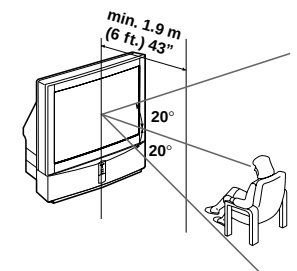
Optimum viewing area (Horizontal)

KP-ES43

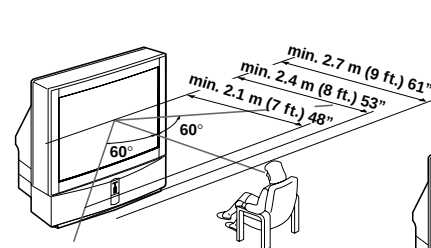


Optimum viewing area (Vertical)

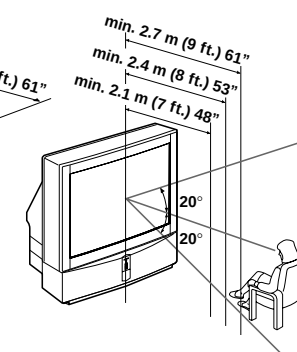
KP-ES43



KP-ES61/53/48

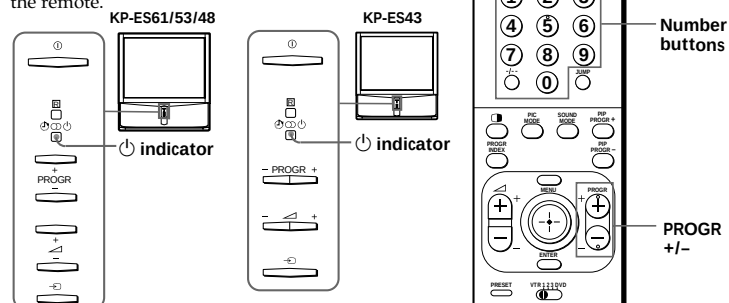


KP-ES61/53/48



Watching the TV

This section explains various functions and operations used while watching the TV. Most operations can be done using the remote.



Using Your New Projection TV

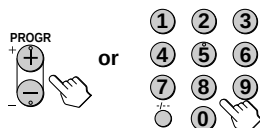
1 Press ① to turn on the projection TV.

When the projection TV is in standby mode (the ① indicator on the projection TV is lit red), press I/⏻ on the remote.



2 Press PROGR +/- or the number buttons to select the TV channel.

For double digit numbers, press +/-, then the number (e.g., for 25, press +/-, then 2 and 5).



Note

- When you turn on the projection TV, either the program number or video mode is displayed for approximately 40 seconds. The ECO MODE (ECO) icon will also appear if "ECO MODE" in the "FEATURE" menu is set "ON" (see page 39).

To select a TV program quickly

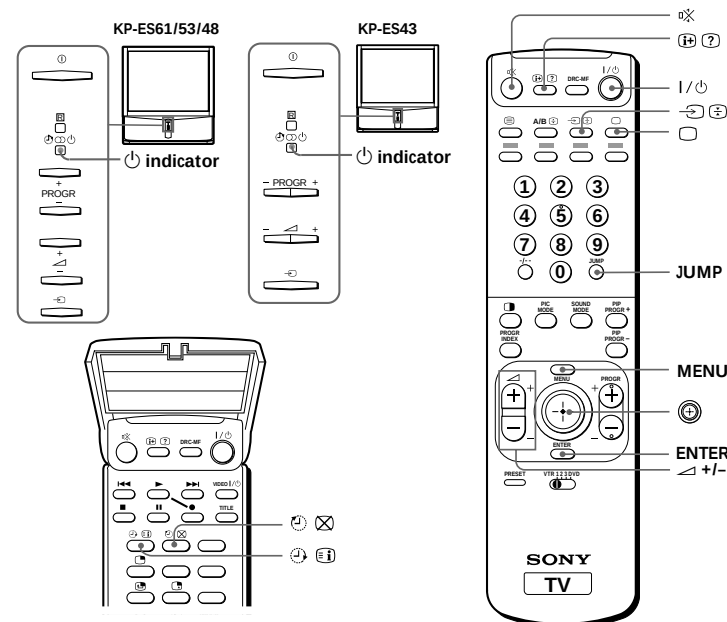
- Press and hold PROGR +/-.
- Release PROGR +/- when the desired program number appears.

Note

- When you select a TV program quickly, the picture may be disrupted. This does not indicate a malfunction.

continued

Watching the TV (continued)



Additional tasks

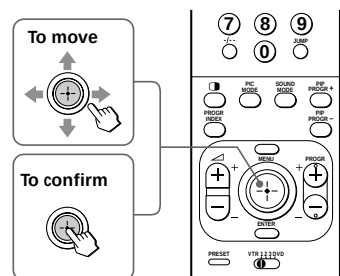
To	Press
Turn off temporarily	I/⏻. The ① indicator on the projection TV lights up red.
Turn off completely	① on the projection TV.
Adjust the volume	⏮ + / -.
Mute the sound	⏸.
Watch the video input (VCR, camcorder, etc.)	⏮ (or ⏮ on the projection TV) to select "VIDEO 1", "VIDEO 2", "VIDEO 3", "VIDEO 4" or "DVD". To return to the TV screen, press ① (or ⏮ on the projection TV).
Jump back to the previous channel	JUMP.
Display the on-screen information*	⏮.

* Some picture/sound settings, and either the program number or video mode are displayed. The on-screen display for the picture/sound settings disappears after about 3 seconds.

Using the Remote Control Button Joystick (⊕)

You can select the menu item on the screen by moving ⊕ up, down, left or right (see page 32).

To confirm a selected item, press ⊕. You can also press ENTER on the remote to confirm a selected item.



Using Your New Projection TV

Changing the menu language

You can change the menu language as well as the on-screen language. For details on how to use the menu, see “Introducing the menu system” on page 30.

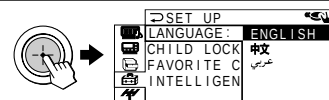
- 1 Press MENU.



- 2 Move ⊕ up or down to select , then press ⊕.



- 3 Make sure “LANGUAGE” is selected then press ⊕.



- 4 Move ⊕ up or down to select the desired language (e.g., “中文”), then press ⊕.



The selected menu language appears.

To return to the normal screen

Press MENU.

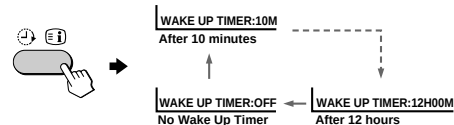
continued

Watching the TV (continued)

Setting the Wake Up timer

- 1 Press  until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



- 2 Select the TV channel or video mode you want to wake up to.

- 3 Press , or set the Sleep timer if you want the projection TV to turn off automatically.

The  indicator on the projection TV lights up orange.

To cancel the Wake Up timer

Press  until “WAKE UP TIMER: OFF” appears, or turn the projection TV off.

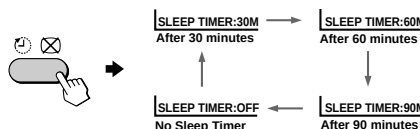
Note

- If no buttons or controls are pressed for more than two hours after the projection TV is turned on using the Wake Up timer, the projection TV automatically goes into standby mode. To resume watching the TV, press any button or control on the projection TV or the remote.

Setting the Sleep timer

Press  until the desired period of time appears.

The Sleep timer starts immediately after you have set it.



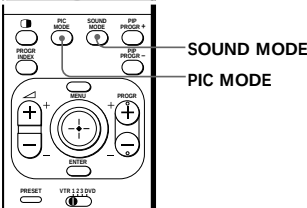
To cancel the Sleep timer

Press  until “SLEEP TIMER: OFF” appears, or turn the projection TV off.

Advanced Operations

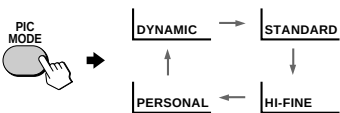
Selecting the picture and sound modes

You can select picture and sound modes and adjust the setting to your preference in the "PERSONAL" option.



Selecting the picture mode

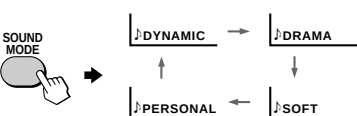
Press PIC MODE repeatedly until the desired picture mode is selected.



Select	To
"DYNAMIC"	receive high contrast pictures.
"STANDARD"	receive normal pictures.
"HI-FINE"	receive higher resolution pictures with mild contrast.
"PERSONAL"	receive the last adjusted picture setting from the "ADJUST" option in the "A/V CONTROL" menu (see page 34).

Selecting the sound mode

Press SOUND MODE repeatedly until the desired sound mode is selected.



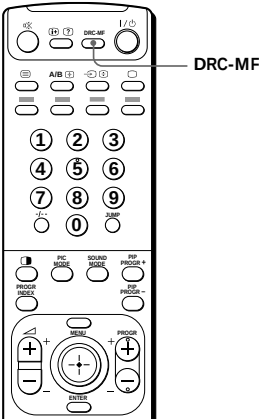
Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes both the low and high tones.
"DRAMA"	listen to sound that emphasizes voice and high tones.
"SOFT"	receive soft sound.
"PERSONAL"	receive the last adjusted sound setting from the "ADJUST" option in the "A/V CONTROL" menu (see page 34).

- Tip
- You can also set the picture and sound modes using the menu (see "Changing the "A/V CONTROL" setting" on page 33).

Viewing higher quality pictures

— "DRC-MF"

The Digital Reality Creation-Multi Function (DRC-MF) feature allows you to enjoy higher quality pictures on your projection TV. You can select "DRC1250" to watch super real (higher resolution) pictures, or "DRC100" to reduce flicker if necessary.



Press DRC-MF repeatedly until you receive the desired picture quality.



Select	To
"DRC1250"	select higher resolution pictures.
"DRC100"	reduce flicker on the screen.

- Tip
- When the broadcast signal is weak, you may see some dots or noise on the TV screen. To reduce this interference, display the "A/V CONTROL" menu and select "ADJUST" in "PICTURE MODE", then adjust "SHARP" to reduce the sharpness (see page 34).
- Note
- The DRC-MF mode is not selectable when using the "PROGRAM INDEX" or "FAVORITE CH" feature, or when the "GAME MODE", Picture-In-Picture ("PIP"), or "TWIN" mode is turned "ON".

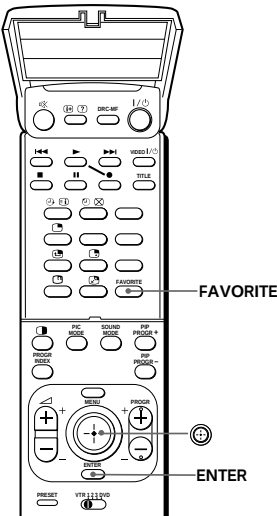
The DRC-MF logo () and "DRC-MF" are trademarks of Sony Corporation.

Viewing your favorite channels

— “FAVORITE CH”

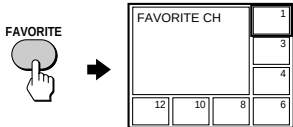
You can display seven favorite channels for quick and easy selection.

The last seven channels selected with the number buttons are displayed in “AUTO” mode. You can set up your own favorite channels in “MANUAL” mode under the “FAVORITE CH” menu (see “Changing the favorite channel setting” on page 42).

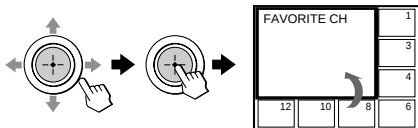


Selecting a favorite channel

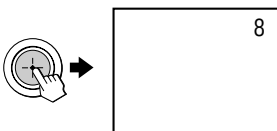
1 Press FAVORITE.



2 Move up, down, left or right to select the desired channel (e.g. PR 8), then press .



3 Press again.



Note

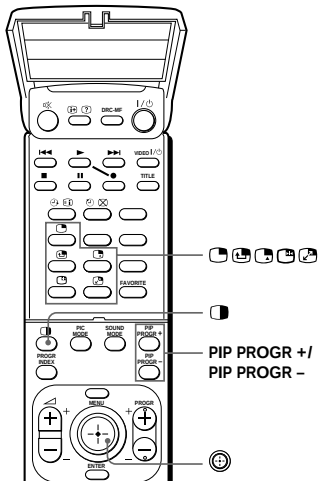
- When you use your projection TV for the first time, seven preset channels appear.

Advanced Operations

Watching two programs at the same time

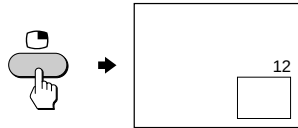
— “PIP”, “TWIN”

With the Picture-in-Picture (PIP) or TWIN pictures features, you can display a different TV program or video within or beside the main picture.



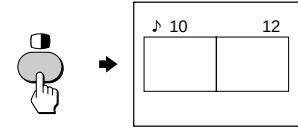
Displaying the PIP screen

Press .



Displaying TWIN pictures

Press .



To return to the normal screen

Press (when in the PIP screen) or (when in the TWIN picture screen).

Tip

- You can also display the PIP screen or TWIN pictures using the menu (see “Changing the MULTI PICTURE setting” on page 36).

Additional PIP/TWIN pictures tasks

To	Press/Move
change a TV program in the PIP screen or in the right TWIN picture	Press PIP PROGR + or PIP PROGR -. For a video input, press
swap pictures between the main and PIP screens	Press
freeze the PIP screen	Press To unfreeze the screen, press the button again.
change the position of the PIP screen	Press
swap the right and left pictures of the TWIN pictures	Press
change the screen size of the TWIN pictures	Move left to increase the left screen size. Move right to increase the right screen size.

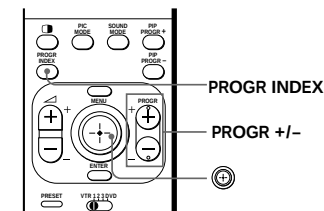
Notes

- The button does not function in the TWIN pictures mode.
- When you display a video input on the PIP screen at a faster/slower speed, the picture may be disrupted depending on the VCR type.
- If you display different color systems on the main screen and the PIP screen, the size of the PIP screen may be different and the PIP picture may be disrupted. This does not indicate a malfunction of the projection TV.
- In the TWIN picture screen, you can only operate and hear the sound of the main left screen (appears on the screen).
- When the button is pressed, the TV screen flickers or goes blank for about one second before the TWIN pictures appear. This does not indicate a malfunction of the projection TV.

Displaying multiple programs

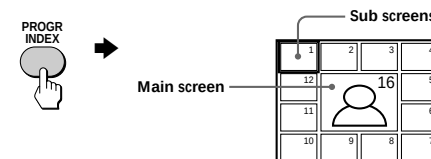
— “PROGRAM INDEX”

The PROGRAM INDEX feature displays all of the preset TV programs on twelve or seven sub screens for direct selection.

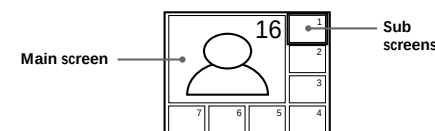


Press PROGR INDEX.

The first twelve preset programs appear one by one, clockwise from the upper left corner.



When the number of the preset TV programs is less than eight, the first seven preset programs appear one by one, clockwise from the upper right corner.



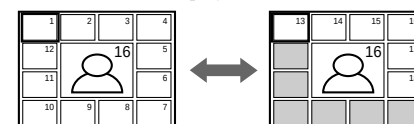
Tip

- When you press the PROGR INDEX button in the TWIN pictures mode, the left picture appears as the main screen of the PROGRAM INDEX mode.

To view the next or the previous twelve preset programs

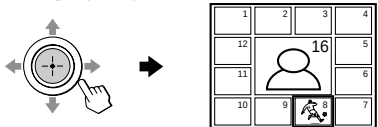
This works only when the number of the preset TV programs is more than twelve.

Press PROGR +/- on the remote or the projection TV.

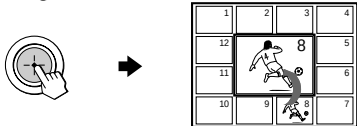


To select the desired program directly from the sub screens

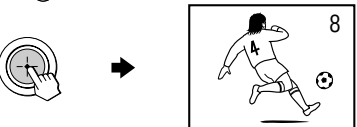
1 Move  up, down, left or right to move the frame to the screen of the program you want to watch.



2 Press .



3 Press  again.



Tip

- Pressing the number buttons directly displays the program.

To return to the normal screen

Press PROGR INDEX again, or:

- Select "PROGRAM INDEX" from the "MULTI PICTURE" menu.
- Press .

Tip

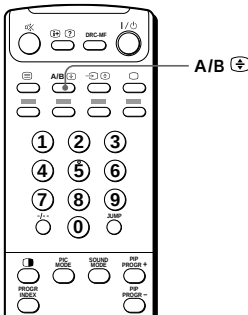
- You can also display multiple programs using the menu (see "Changing the MULTI PICTURE setting" on page 36).

Note

- When displaying multiple programs, only the sound of the main screen is heard.

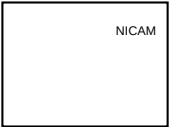
Enjoying stereo or bilingual programs

You can enjoy stereo sound or bilingual programs of NICAM and A2 (German) stereo systems.



Press A/B repeatedly until you receive the sound you want.

The on-screen display changes to show the selected sound and the  indicator on the projection TV lights up red.



When receiving a NICAM program

Broadcasting	On-screen display (Selected sound)	
NICAM stereo	NICAM (Stereo sound) → MONO (Regular sound)	
NICAM bilingual	NICAM MAIN (Main sound) → NICAM SUB (Sub sound) → MONO (Regular sound)	
NICAM monaural	NICAM MAIN (Main sound) → MONO (Regular sound)	

When receiving an A2 (German) program

Broadcasting	On-screen display (Selected sound)	
A2 (German) stereo	MONO (Regular sound)	STEREO (Stereo sound)
A2 (German) bilingual	MAIN (Main sound)	SUB (Sub sound)

Receiving area for NICAM and A2 (German) programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
A2 (German)	Australia, Malaysia, Thailand, etc.

Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select "MONO". The sound becomes monaural, but the noise is reduced.
- Before receiving a NICAM stereo program in China, please check the NICAM broadcast condition at your area. When receiving a NICAM stereo program, the receiving conditions might vary depending on area. In addition, different strength of the NICAM broadcast signal might affect the receiving quality.

If the sound is distorted or noisy when receiving a monaural program through the ∇ (antenna) terminal

Press A/B repeatedly until "MONO" appears on the screen.

To cancel the monaural sound setting, press A/B again until "AUTO" appears on the screen.

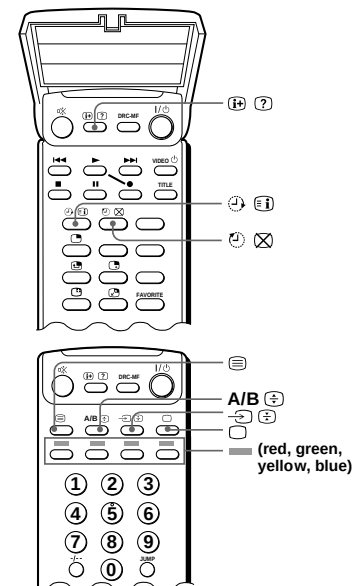


Notes

- The "MONO" or "AUTO" setting is memorized for each program position.
- You cannot receive a stereo broadcast signal when the projection TV is in the "MONO" setting. Normally, set the projection TV to "AUTO".

Viewing Teletext

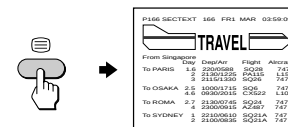
Some TV stations broadcast an information service called Teletext which allows you to receive various information, such as stock market reports and news.



Displaying Teletext

- 1 Select a TV channel that carries the Teletext broadcast you want to watch.
- 2 Press  to display the text.

A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, "100?" is displayed at the top left corner of the screen after approximately 10 seconds.



To turn off Teletext

Press $\square$.

Additional Teletext tasks

To	Do this
display a Teletext page on the TV picture	Press . Each time you press , the screen changes as follows: Teletext → Teletext and TV → TV.
check the contents of a Teletext service	Press . An overview of the Teletext contents, including page numbers, appears on the screen.
select a Teletext page	Press the number buttons to enter the three-digit page number of the desired Teletext page.* If you make a mistake, reenter the correct page number. To access the next or previous page, press PROGR +/-.
hold (pause) a Teletext page (stop the page from scrolling)	Press to display the symbol "⏸" at the top left corner of the screen. To resume normal Teletext viewing, press or .
reveal concealed information (e.g., an answer to a quiz)	Press . To conceal the information, press the button again.
enlarge the Teletext display	Press . Each time you press , the Teletext display changes as follows: Enlarge upper half → Enlarge lower half → Normal size.
stand by for a Teletext page while watching a TV program	1 Enter the Teletext page number that you want to refer to, then press . 2 When the page number is displayed, press to show the text.

* You can also select a Teletext page of any page number that appears in the colored column at the bottom of the screen using the corresponding color-coded button on the remote.

Using FASTEXT

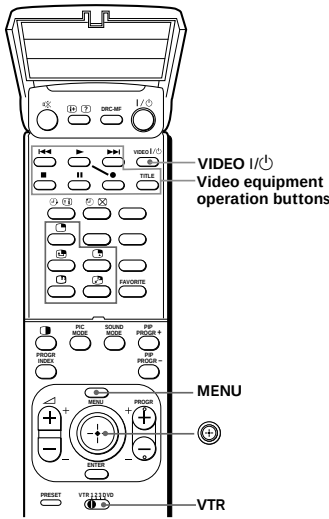
This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT program is broadcast, colored menus appear at the bottom of the screen. The color of each menu corresponds to the color-coded buttons on the remote (red , green , yellow , and blue).

To access a FASTEXT menu

Press the color-coded button on the remote corresponding to the menu you want. The menu page appears on the screen after a few seconds.

Operating optional components

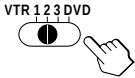
You can use the supplied remote to operate Sony video equipment such as Beta, 8 mm, VHS or DVD.



Setting up the remote to work with other connected equipment

Switch VTR to select the desired equipment type (see the chart below).

For example, to operate a Sony 8 mm VCR:



To control	Select
DVD	DVD
VTR1 (Beta)	1
VTR2 (8 mm)	2
VTR3 (VHS)	3

- Notes
- If your video equipment is furnished with a COMMAND MODE selector, set this selector to the same position as the VTR switch.
 - If the equipment does not have a certain function, the corresponding button on the remote will not operate.

Operating a VCR using the remote

To	Press
turn on/off	VIDEO I /
record	while pressing .
play	
stop	
fast forward ()	
rewind the tape ()	
pause	
	Press again to resume normal playback.
search the picture forward () or backward ()	or during playback. Release to resume normal playback.

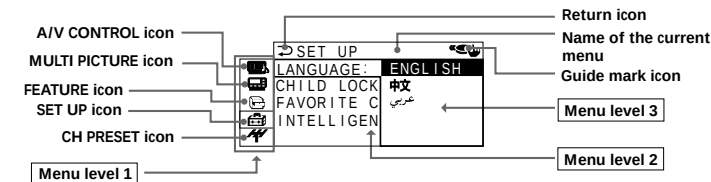
Operating a DVD player using the remote

To	Press
turn on/off	VIDEO I /
play	
stop	
pause	
	Press again to resume normal playback.
step through different tracks of an audio disc	to step forward or to step backward.
display the title menu	TITLE
display the menu	MENU while holding down .
select the menu item	Move up, down, left or right while holding down .

Adjusting Your Setup (MENU)

Introducing the menu system

The MENU button lets you open a menu and change the settings of your projection TV. The following is an overview of the menu system.



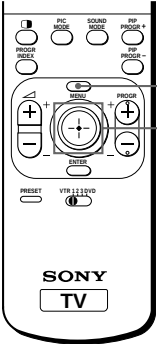
Level 1	Level 2	Level 3/Function
"A/V CONTROL" 	"DRC-MF"	Select the "DRC-MF" mode: "DRC1250" → "DRC100"
	"PICTURE MODE"	Select the picture mode: "DYNAMIC" → "STANDARD" → "HI-FINE" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "PICTURE" → "COLOR" → "BRIGHT" → "HUE" → "SHARP"
	"SOUND MODE"	Select the sound mode: "DYNAMIC" → "DRAMA" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "BASS" → "TREBLE" → "BALANCE"
	"SPEAKER"	Select the "SPEAKER" mode: "MAIN" → "CENTER IN"
"MULTI PICTURE" 	"PIP"	Activate or deactivate the PIP feature.
	"PIP POSITION"	Change the position of the sub screen.
	"SWAP"	Swap the pictures between the main and sub screens.
	"TWIN"	Display a TV program or video beside the main screen.
"FEATURE" 	"PROGRAM INDEX"	Display all the preset TV programs at the same time.
	"WIDE MODE"	Activate or deactivate WIDE MODE feature.
	"ECO MODE"	Activate or deactivate ECO MODE feature.
	"GAME MODE"	Activate or deactivate GAME MODE feature.

Level 1	Level 2	Level 3/Function
"SET UP" 	"LANGUAGE"	Change the menu language: "ENGLISH" → "中文" (Chinese) → "عربي" (Arabic)
	"CHILD LOCK"	Lock out specific channels.
	"FAVORITE CH"	Set favorite channels.
	"INTELLIGENT VOL"	Adjust the volume automatically.
"CH PRESET" 	"AUTO PROGRAM"	Preset channels automatically.
	"MANUAL PROGRAM"	Preset channels manually.
	"SKIP"	Skip unwanted or unused program numbers.
	"TV SYS"	Select the TV system: "B/C" → "I" → "D/K" → "M"
	"COL SYS"	Select the color system: "AUTO" → "PAL" → "SECAM" → "NTSC3.58" → "NTSC4.43"

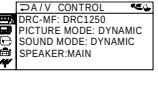
continued

Introducing the menu system (continued)

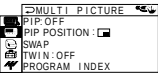
How to use the menu



Press MENU to display the menu.



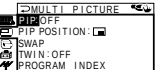
Move the button joystick (⊕) up, down, left or right to select the desired item.



Press the button joystick (⊕) to confirm the selection and/or go to the next level. You can also press ENTER on the remote to do this.



OR



Other menu operations

To	Press/Move
Adjust the setting value	Move ⊕ up, down, left or right.
Move to the next/previous menu level	Move ⊕ left or right.
Cancel the menu	Press MENU.

Tips

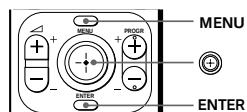
- If you want to exit from Menu level 2 to Menu level 1, move ⊕ up or down until the return icon (⏮) is highlighted, then press ⊕ or ENTER.
- The MENU, ENTER, and ⏮ +/- buttons on the projection TV can also be used for the operations above.
- The ⏮ + and ⏮ - buttons on the projection TV can also be used instead of moving the button joystick (⊕) up or down.

Note

- If more than 60 seconds elapse between entries, the menu screen automatically disappears.

Changing the “A/V CONTROL” setting

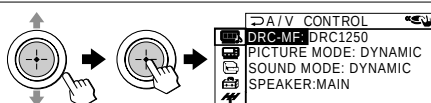
The “A/V CONTROL” menu allows you to adjust the picture and sound settings.



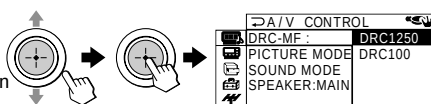
- 1 Press MENU.



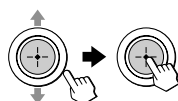
- 2 Move up or down to select , then press .



- 3 Move up or down to select either “DRC-MF”, “PICTURE MODE”, “SOUND MODE”, or “SPEAKER”, then press .



- 4 Move up or down to select the desired option, then press .



For	Select
“DRC-MF”	either “DRC1250” or “DRC100”.
“PICTURE MODE”	either “DYNAMIC”, “STANDARD”, “HI-FINE”, “PERSONAL”*, or “ADJUST”.
“SOUND MODE”	either “DYNAMIC”, “DRAMA”, “SOFT”, “PERSONAL”*, or “ADJUST”.
“SPEAKER”	either “MAIN” or “CENTER IN”.

* When the “PERSONAL” mode is selected, the last adjusted picture/sound settings from the “ADJUST” option are received (see page 34).

Tip

- For details on the options under the “DRC-MF”, “PICTURE MODE”/ “SOUND MODE”, and “SPEAKER” modes, see pages 18, 17 and 35 respectively.

To return to the normal screen

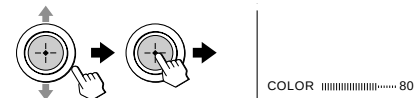
Press MENU.

continued

Changing the “A/V CONTROL” setting (continued)

Adjusting the “ADJUST” options under “PICTURE MODE”

- 1 Move up or down to select the desired item (e.g., “COLOR”), then press .



- 2 Adjust the value according to the following table, then press .

For	Move down or left to	Move up or right to
“PICTURE”	decrease picture contrast	increase picture contrast
“COLOR”	decrease color intensity	increase color intensity
“BRIGHT”	darken the picture	brighten the picture
“HUE”*	increase red picture tones	increase green picture tones
“SHARP”	soften the picture	sharpen the picture

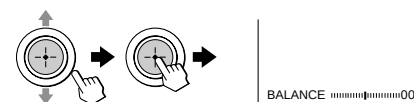
* You can adjust “HUE” for the NTSC color system only.

- 3 Repeat the above steps to adjust other items.

The adjusted settings will be received when you select “PERSONAL”.

Adjusting the “ADJUST” options under “SOUND MODE”

- 1 Move up or down to select the desired item (e.g., “BALANCE”), then press .



- 2 Adjust the value according to the following table, then press .

For	Move
“BASS”	down or left to decrease the bass, up or right to increase the bass.
“TREBLE”	down or left to decrease the treble, up or right to increase the treble.
“BALANCE”	down or left to increase the left speaker’s volume, up or right to increase the right speaker’s volume.

- 3 Repeat the above steps to adjust other items.

The adjusted settings will be received when you select “PERSONAL”.

Setting the “SPEAKER” options

- 1 In the “SPEAKER” menu, move  up or down to select the desired option (see table below).

Select	To
“MAIN”	listen to the sound from a projection TV.
“CENTER IN”	use the projection TV speakers as center speakers.

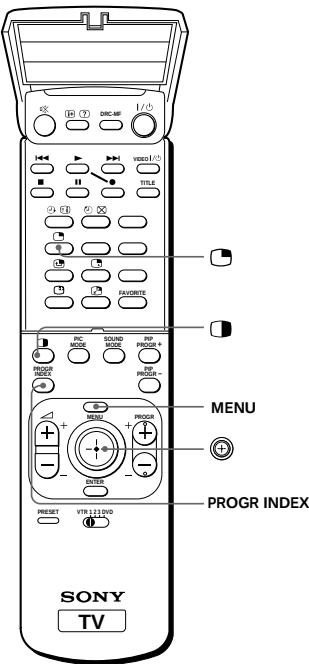
- 2 Press  to confirm the selected option.

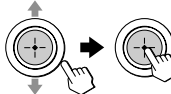
Tip

- For details on the menu system and how to use the menu, refer to “Introducing the menu system” on page 30.

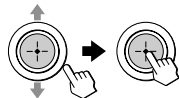
Changing the “MULTI PICTURE” setting

The “MULTI PICTURE” menu allows you to use the Picture-in-Picture (PIP), TWIN pictures, or PROGRAM INDEX features.

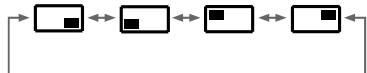


- 1 Press MENU.
 
- 2 Move  up or down to select , then press .
 

- 3** Move  up or down to select the desired option (see the table below), then press .



Select	To
"PIP"	display the PIP screen within the main picture. Move  up or down to select "ON", then press  .
"PIP POSITION"	change the position of the PIP screen. Move  up or down to select the desired position, then press  .
"SWAP"	swap the main and PIP screens, or right and left pictures of the TWIN pictures.
"TWIN"	display a different TV program or video beside the main picture. Move  up or down to select "ON", then press  .
"PROGRAM INDEX"	view multiple programs on the sub-screens. To cancel, press PROGR INDEX.



To return to the normal screen

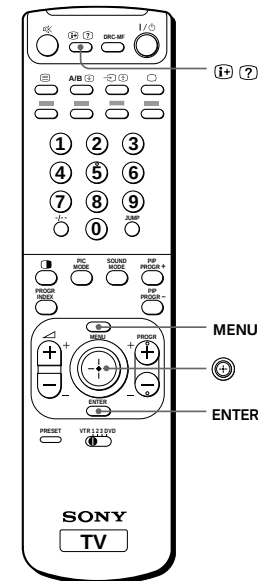
Press MENU.

Tip

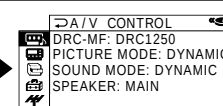
- For details on the menu system and how to use the menu, see "Introducing the menu system" on page 30.

Changing the "FEATURE" setting

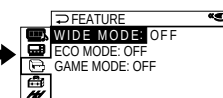
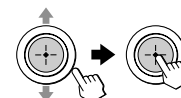
The "FEATURE" menu allows you to change the size of the picture on the screen when receiving wide mode (16:9) picture signals. You can also adjust the picture setting that is suitable for viewing video games, and reduce the power consumption of your projection TV.



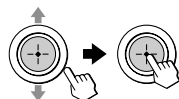
- 1** Press MENU.

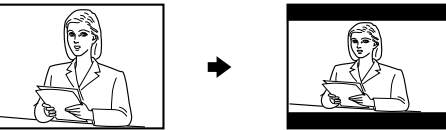


- 2** Move  up or down to select , then press .



- 3 Move  up or down to select the desired option (see the table below), then press .



Select	To
"WIDE MODE"	change the size of the picture when receiving wide-mode (16:9) picture signal. Move  up or down to select "ON", then press  .
	 To restore the normal picture size, select "OFF" then press  .
"ECO MODE"	reduce power consumption of your projection TV to save energy. Move  up or down to select "ON", then press  . To cancel, select "OFF", then press  .
"GAME MODE"	adjust the picture setting that is suitable to view video games. Move  up or down to select "ON", then press  . To cancel, select "OFF", then press  .

Notes

- When you turn on "ECO MODE", the picture may become dimmer. Turning "ECO MODE" off will restore the picture to its original setting.
- "WIDE MODE" is available only when you have selected DRC1250 (NTSC mode) in the "A/V CONTROL" menu with video input or DVD input.
- "WIDE MODE" and "GAME MODE" is available only when receiving signals through the  (video input),  (S video input), or  (component video input) jacks at the front and rear of your projection TV.
- If "ECO MODE" is on, the ECO MODE () icon will appear at the bottom right corner of the screen when you turn on the projection TV or when you press  on the remote. (See pages 13 and 14)

To return to the normal screen

Press MENU.

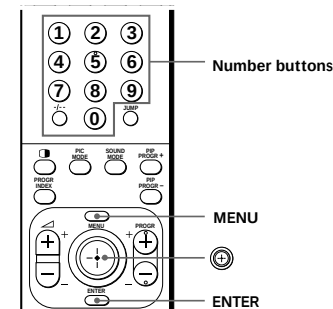
Tip

- For details on the menu system and how to use the menu, see "Introducing the menu system" on page 30.

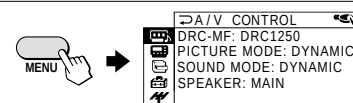
Adjusting Your Setup (MENU) | 39

Changing the "SET UP" setting

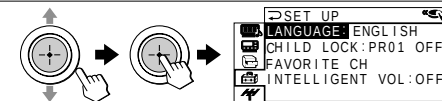
The "SET UP" menu allows you to: change the menu language, block channels, adjust the picture position, program your favorite channels, and adjust the volume automatically.



- 1 Press MENU.



- 2 Move  up or down to select , then press .



- 3 Move  up or down to select the desired option, then press .



Select	To
"LANGUAGE"	change the menu language (see page 15).
"CHILD LOCK"	block channels (see page 41).
"FAVORITE CH"	select your favorite channels (see pages 19 and 42).
"INTELLIGENT VOL"	adjust the volume of all TV programs automatically. Move  up or down to select "ON", then press  . To cancel, select "OFF", then press  .

To return to the normal screen

Press MENU.

40 | Adjusting Your Setup (MENU)

Blocking channels ("CHILD LOCK")

1 After selecting "CHILD LOCK", either move up or down, or press the number buttons (or PROGR +/-) to select the desired channel (e.g. PR 06), then press .

2 Move up or down to select "ON", then press . To unlock the channel, select "OFF". The lock symbol () appears on the screen when "ON" is selected.

If a locked channel is selected, the lock symbol appears on the screen.



3 Repeat steps 1 and 2 to lock other channels.

To return to the normal screen

Press MENU.

Note

- If you preset a locked channel, that channel will be unlocked automatically (see page 43).

continued

Changing the "SET UP" setting (continued)

Changing the favorite channel setting

1 After selecting "FAVORITE CH", make sure "MODE" is selected, then press .

2 Move up or down to select "MANUAL", then press .

3 Move up or down to select the program you want to change, then press .

4 Move up or down to change the number, then press .

5 Repeat steps 3 and 4 to set other channels.

To return to the normal screen

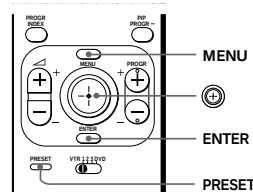
Press MENU.

Note

- If you press the PROGR +/- buttons or number buttons in step 4 above, the projection TV will display the channel immediately.

Changing the “CH PRESET” setting

The “CH PRESET” menu allows you to adjust the setup of your projection TV. For example, you can manually tune in a channel with a weak signal that fails to be tuned in by automatic presetting.



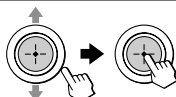
1 Press MENU.



2 Move $\uparrow/\downarrow$ up or down to select CH PRESET , then press ENTER .



3 Move $\uparrow/\downarrow$ up or down to select the desired option, then press ENTER .



Select	To
“AUTO PROGRAM”	preset channels automatically.
“MANUAL PROGRAM”	preset channels manually. See “Presetting channels manually” on page 44.
“SKIP”	skip unwanted or unused channels. 1 Either move $\uparrow/\downarrow$ up or down, or press the number buttons (or PROGR +/-) until the unused or unwanted channel number appears, then press ENTER . 2 Select “ON”, then press ENTER . 3 To disable other channels, repeat steps 1 and 2. To restore the skipped channel, select “OFF” in step 2.
“TV SYS”	select the TV system.
“COL SYS”	select the color system. Normally, set this to “AUTO”.

To return to the normal screen

Press MENU.

Tip

- For details on the menu system and how to use the menu, refer to “Introducing the menu system” on page 30.

continued

Changing the “CH PRESET” setting (continued)

Presetting channels manually

1 After selecting “MANUAL PROGRAM”, select the program number to which you want to preset a channel.

- Make sure “PR” is selected, then press ENTER .
- Move $\uparrow/\downarrow$ up or down until the program number you want to preset (e.g., program number “10”) appears on the menu, then press ENTER .

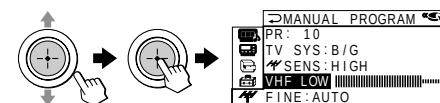
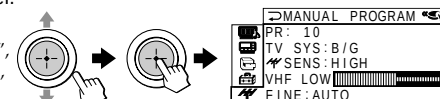


Tips

- You can also select the “MANUAL PROGRAM” menu directly by pressing the PRESET button on the remote.
- You can also select the program number with the PROGR +/- or number buttons.

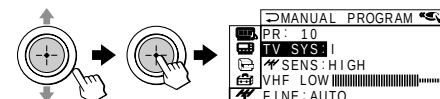
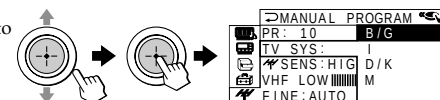
2 Select the desired channel.

- Move $\uparrow/\downarrow$ up or down to select either “VHF LOW”, “VHF HIGH”, or “UHF”, then press ENTER .
- Move $\uparrow/\downarrow$ up or down until the desired channel’s broadcast appears on the TV screen, then press ENTER .



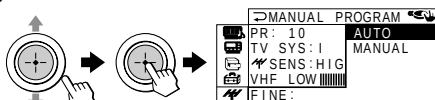
3 If the sound of the desired channel is abnormal, select the appropriate TV system.

- Move $\uparrow/\downarrow$ up or down to select “TV SYS”, then press ENTER .
- Move $\uparrow/\downarrow$ up or down until the sound becomes normal, then press ENTER .

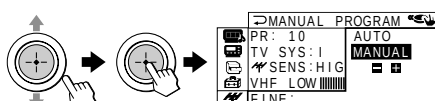


4 If you are not satisfied with the picture and sound quality, you may be able to improve them by using the "FINE" tuning feature.

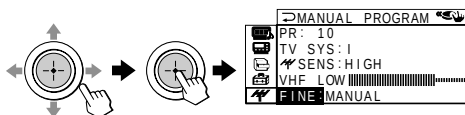
(1) Move up or down to select "FINE", then press .



(2) Move up or down to select "MANUAL", then press .

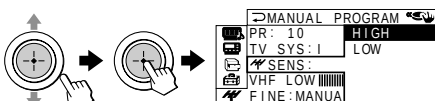


(3) Move either up, down, left or right until the picture and sound quality are optimal, then press . The + or - icon on the menu flashes while tuning.

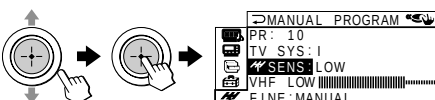


5 If the TV signal is too strong and the picture is distorted, you can adjust the TV reception sensitivity.

(1) Move up or down to select "SENS", then press .



(2) Move up or down to select "LOW", then press .



To return to the normal screen

Press MENU.

Notes

- The TV system ("TV SYS") and the TV reception sensitivity ("SENS") settings are memorized for each program number.
- If you preset a locked channel, that channel will be unlocked automatically (see page 41).

Additional Information

Troubleshooting

If you have any problem while viewing your TV, please check the following troubleshooting guide. If the problem persists, contact your Sony dealer.

Symptom	Possible cause	Solutions	Page
	The connection is loose or the cable is damaged.	Check the antenna cable and connection on the projection TV, VCR and at the wall.	5
	Channel presetting is inappropriate or incomplete.	Press the PRESET button to display the "MANUAL PROGRAM" menu and preset the channel again.	44
	The antenna type is inappropriate.	Check the antenna type (VHF/UHF). Contact a Sony dealer for advice.	-
	The antenna direction needs adjustment.	Adjust the antenna direction. Contact a Sony dealer for advice.	-
	Signal transmission is low.	Try using a booster.	-
	Broadcast signals are too strong.	- Press the PRESET button to display the "MANUAL PROGRAM" menu. Then, select "SENS: LOW". - Turn off or disconnect the booster if it is in use.	45
			-
	The TV system setting is inappropriate.	If the sound of all the channels are noisy, display the "CH PRESET" menu and select "AUTO PROGRAM" to preset the channels again.	43
		If the sound of some channels is noisy, select the channel, then display the "CH PRESET" menu and select the appropriate TV system ("TV SYS").	44
	The power cord, antenna or VCR is not connected.	Check the power cord, antenna and the VCR connections.	5
	The projection TV is not turned on.	- Press I/⏻ on the remote. - Press ① on the TV to turn off the projection TV for about five seconds, then turn it on again.	13 14

Symptom	Possible cause	Solutions	Page
Good picture 	- The volume level is too low. - The sound is muted. - The broadcast signal has a transmission problem.	- Press $\triangleleft$ + to increase the volume level. - Press $\times$ to cancel the muting. - Press A/B until a better sound is heard.	14 14 24
No sound 	The "SPEAKER" setting in the "AV CONTROL" menu is inappropriate.	When connecting to $\mathbb{D}$ $\leftarrow$ C- (center speaker input) on your projection TV to use the projection TV speakers as center speakers, set SPEAKER: CENTER IN, or set SPEAKER: MAIN to listen to the sound from a projection TV.	35
Dotted lines or stripes 	There is local interference from cars, neon signs, hair dryers, power generators, etc.	- Do not use a hair dryer or other equipment near the projection TV. - Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	- -
Double images or "ghosts" 	- Broadcast signals are reflected by nearby mountains or buildings. - The antenna direction needs adjustment. - Use of a booster is inappropriate.	- Use a highly directional antenna. - Use the fine tuning ("FINE") function. - Adjust the antenna direction. Contact a Sony dealer for advice. - Turn off or disconnect the booster if it is in use.	- 45 -
No color 	- The color level setting is too low. - The color system setting is inappropriate. - The antenna direction needs adjustment.	- Display the "A/V CONTROL" menu and select "ADJUST" of "PICTURE MODE", then adjust the "COLOR" level. - Display the "CH PRESET" menu and check the color system ("COL SYS") setting (usually set this to "AUTO"). - Adjust the antenna direction. Contact a Sony dealer for advice.	34 43 -
Abnormal color patches 	The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the projection TV.	Locate external speakers or other equipment away from the projection TV. Do not move the projection TV while the projection TV is turned on. Press $\odot$ on the projection TV to turn off the TV for about five minutes, then turn it on again.	-

Additional Information

continued

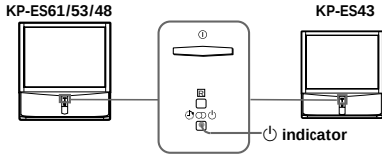
Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
Projection TV cannot receive stereo broadcast signal.	The stereo reception setting is inappropriate.	Press A/B until "AUTO" appears on the screen.	24
Stereo broadcast sound switches on and off or is distorted. OR The sound switches between stereo and monaural frequently.	- The connection is loose or the cable is damaged. - The antenna direction needs adjustment. - The broadcast signal has a transmission problem.	- Check the antenna cable and connection on the projection TV, VCR and on the wall. - Adjust the antenna direction. Contact a Sony dealer for advice. - Press A/B until a better sound is heard.	5 - 24
"100?" appears at the top of the screen after approximately 10 seconds and there is no Teletext display.	The channel carries no Teletext broadcast.	—	26
Teletext display is incomplete (snowy picture or double images).	- Connection is loose or the cable is damaged. - The antenna direction is inappropriate. - Signal transmission is too low.	- Check the antenna cable and connection on the projection TV, VCR, and at the wall. - Adjust the antenna direction. Contact a Sony dealer for advice. - Try using a booster. - Use the fine tuning ("FINE") function.	5 - 45
Lines moving across the TV screen.	There is interference from external sources, e.g., heavy machineries, nearby broadcast station.	Use the fine tuning ("FINE") function.	45
Cannot play shooting games.	Some shooting games which involve pointing a light beam at the projection TV screen with an electronic gun or rifle cannot be used with your TV. For detail, see the instruction manual supplied with the video game software.	—	-

Symptom	Possible cause	Solutions	Page
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, causing a noise. This does not indicate a malfunction.	—	—
Static discharge is felt when touching the TV cabinet.	• This is the same static discharge that is felt when touching metal door handles or car doors especially when the air is dry, for example in winter. This does not indicate a malfunction.	—	—

Self-diagnosis function

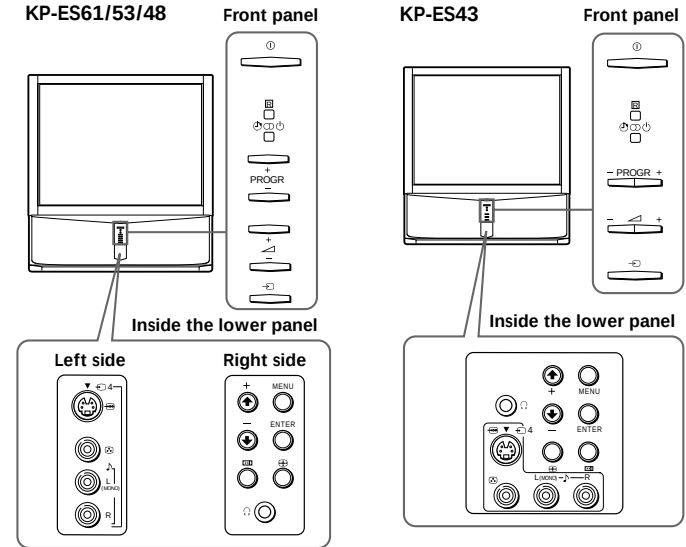
Your projection TV is equipped with a self-diagnosis function. If there is a problem with your projection TV, the  (standby) indicator flashes red. The number of times the  indicator flashes indicates the possible causes.



- 1 Check that the  indicator flashes red a number of times between 3-second intervals.
- 2 Count the number of times the  indicator flashes.
- 3 Press  (main power) to turn off your projection TV.
- 4 Inform your nearest Sony service center about the number of times the  indicator flashed.
Be sure to note the model name and serial number located on the rear of your projection TV.

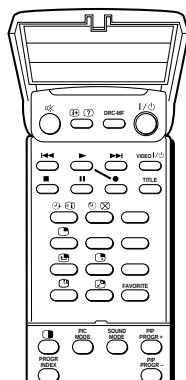
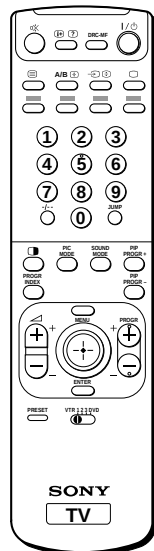
Identifying parts and controls

Front and inside the lower panels



Button	Function	Page
Front panel		
	Turn off completely or turn on the projection TV.	13
PROGR +/-	Select program number.	13
	Adjust volume.	14
	Select TV or video input.	14
Inside the lower panel		
MENU	Display the menu.	32
ENTER	Confirm selected items.	32
	Adjust convergence.	7
	Preset channel automatically.	6
	Select menu item.	32
	Headphone jack	—

Remote control



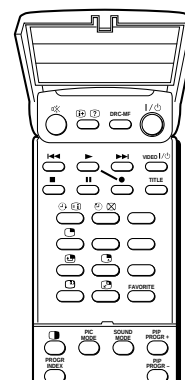
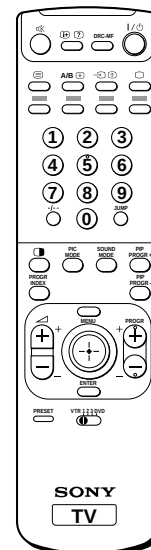
The names/symbols of buttons on the remote are indicated in different colors to represent the available functions.

Label color	Button function
White	For general TV operations
Green	For Teletext operations
Yellow	For PIP operations

Button	Function	Page
I /	Turn off temporarily or turn on the projection TV.	13
PROGR +/-	Select program number.	13
0 - 9, +/-	Input numbers.	13
	Display on-screen information.	14
	Mute the sound.	14
	Display the TV program.	14
	Select TV or video input.	14
	Adjust volume.	14
JUMP	Jump to previous channel.	14
Timer operations		
	Set projection TV to turn on automatically.	16
	Set projection TV to turn off automatically.	16
SOUND MODE	Select sound mode.	17
PIC MODE	Select picture mode.	17
DRC-MF	Select DRC-MF mode.	18
Favorite Channel operations		
FAVORITE	Display favorite channels.	19
	Select desired channel.	19
PIP and Twin picture operations		
	Display the PIP screen.	20
	Display TWIN pictures.	20
	Adjust Twin picture size.	21
PIP PROGR +/-	Change program in PIP/Twin picture.	21
PIP PROGR -	Select video input for PIP/Twin picture.	21
	Swap main and PIP/Twin picture.	21
	Freeze PIP screen.	21
	Adjust position of PIP screen.	21

continued

Identifying parts and controls (continued)

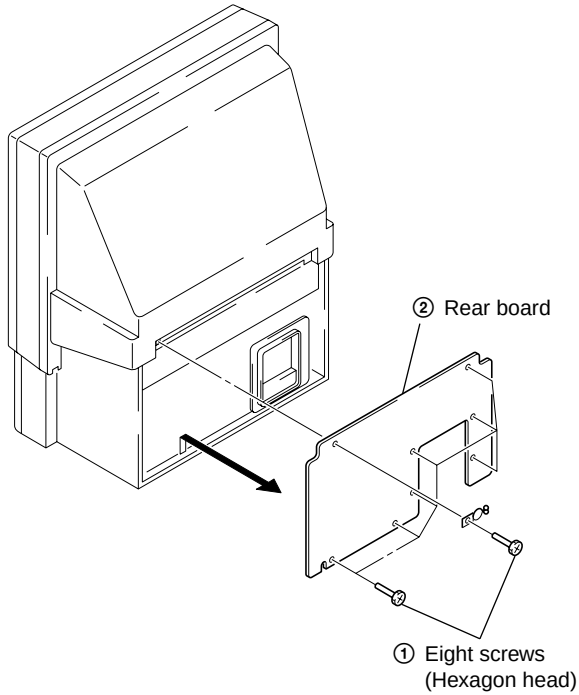


Button	Function	Page
Program Index operations		
PROGR INDEX	Display all preset TV programs.	22
PROGR +/-	View next/previous 12 TV programs.	22
	Select desired channel.	23
Stereo/bilingual operations		
A/B	Select stereo/bilingual mode.	24
Teletext operations		
	Display Teletext broadcast.	26
	Display Teletext service contents.	27
	Stop Teletext page from scrolling.	27
	Reveal concealed information.	27
	Enlarge the Teletext display.	27
	Show TV screen while waiting for Teletext page.	27
0 - 9	Input Teletext page number.	27
PROGR +/-	Display the next or previous page.	27
	Access a FASTEXT menu.	27
Optional components operations		
VTR	Set up the remote.	28
VIDEO I /	Power.	29
TITLE	Display the title menu.	29
	Play.	29
	Fast forward/Search forward.	29
	Rewind/Search backward.	29
	Record.	29
	Stop.	29
	Pause.	29
Menu operations		
MENU	Display the menu.	32
	Select, adjust and confirm selected items.	32
ENTER	Confirm selected items.	32
PRESET	Display "MANUAL PROGRAM" menu.	44

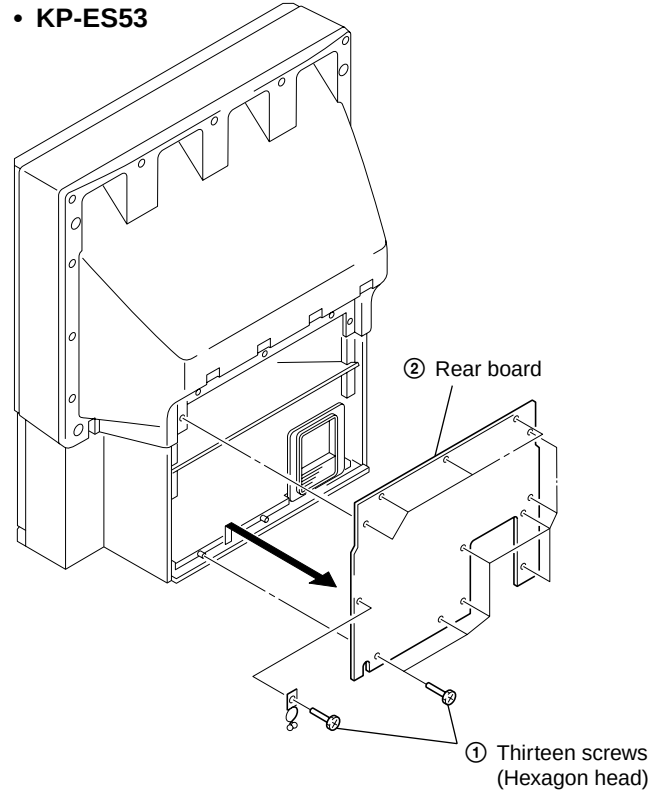
SECTION 3 DISASSEMBLY

3-1. REAR BOARD REMOVAL

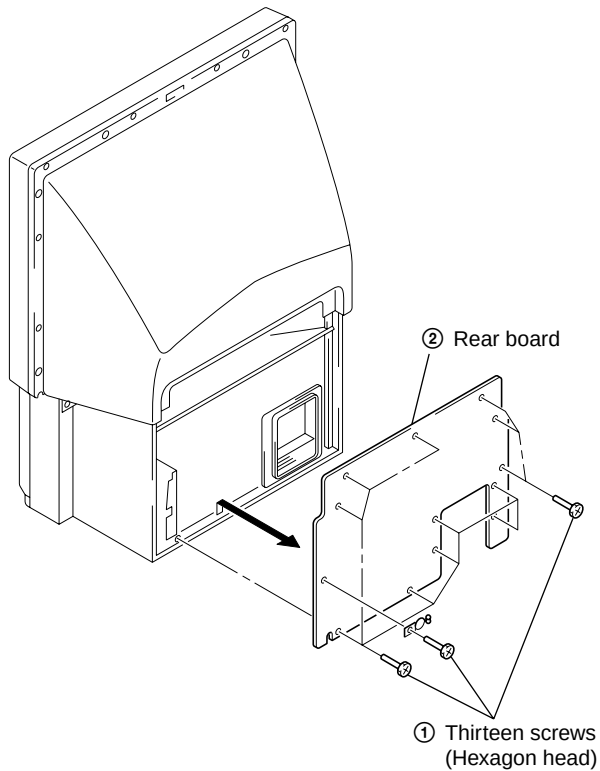
• KP-ES43



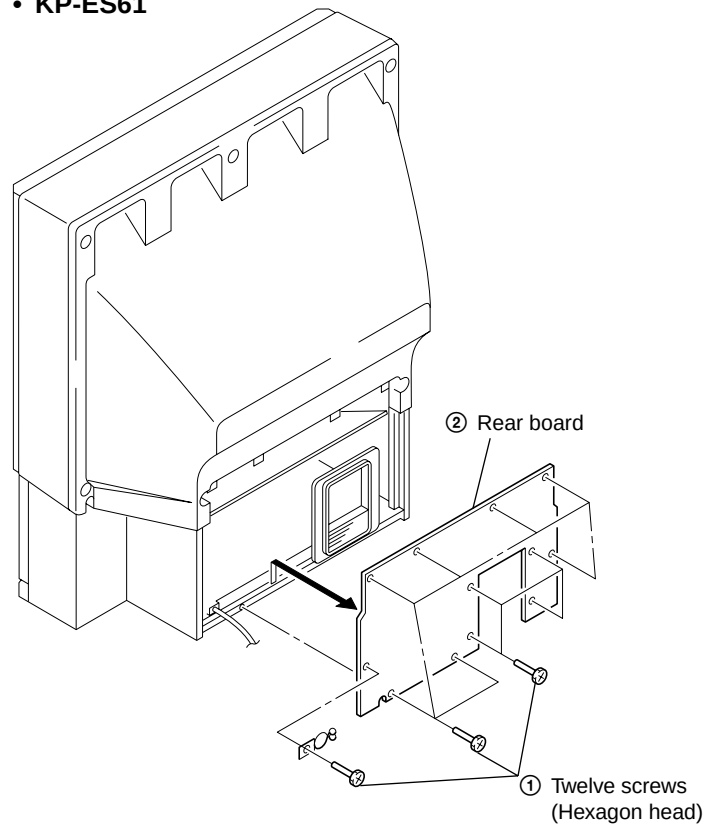
• KP-ES53



• KP-ES48

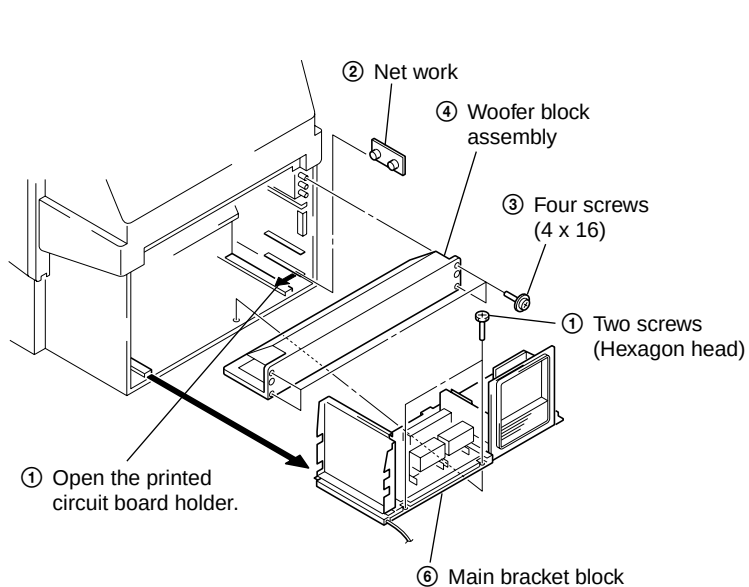


• KP-ES61



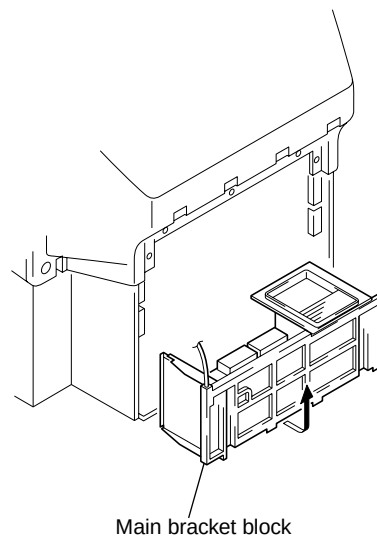
3-2. MAIN BRACKET BLOCK REMOVAL

• KP-ES43

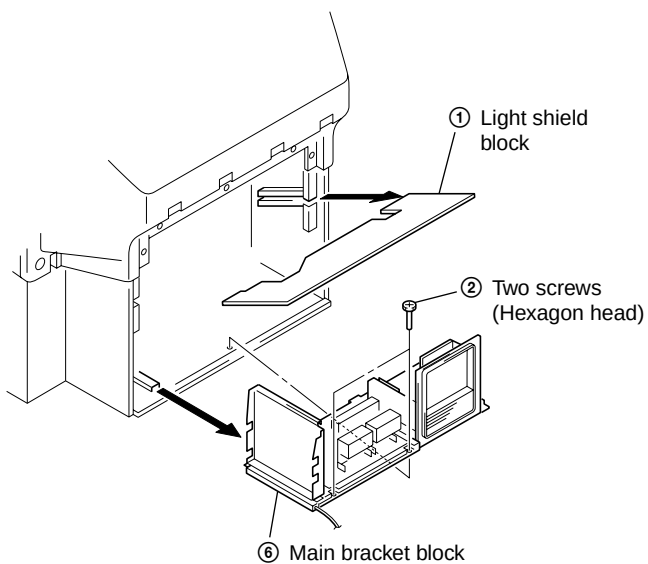


3-3. SERVICE POSITION

• KP-ES43/ES48/ES53/ES61

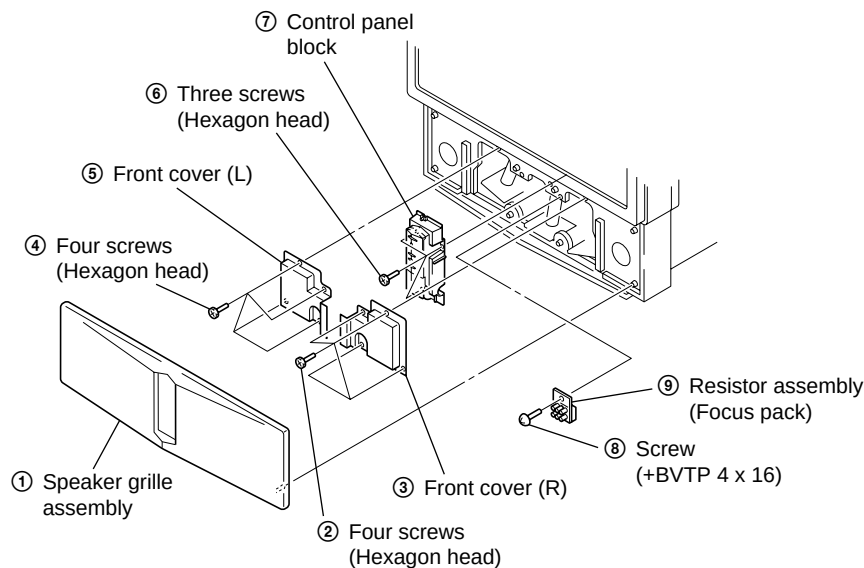


• KP-ES48/ES53/ES61

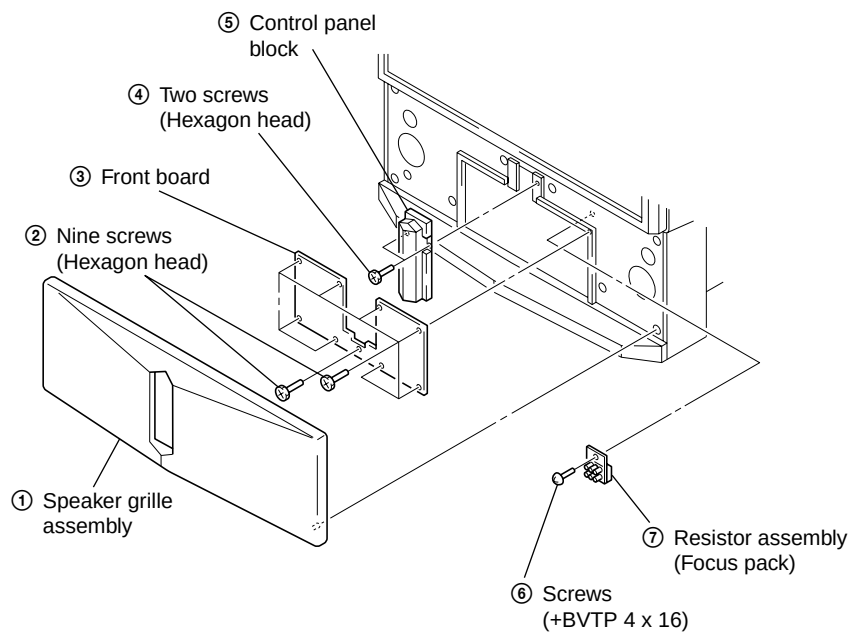


3-4. CONTROL PANEL BLOCK AND RESISTOR ASSEMBLY (FOCUS PACK) REMOVAL

• KP-ES43

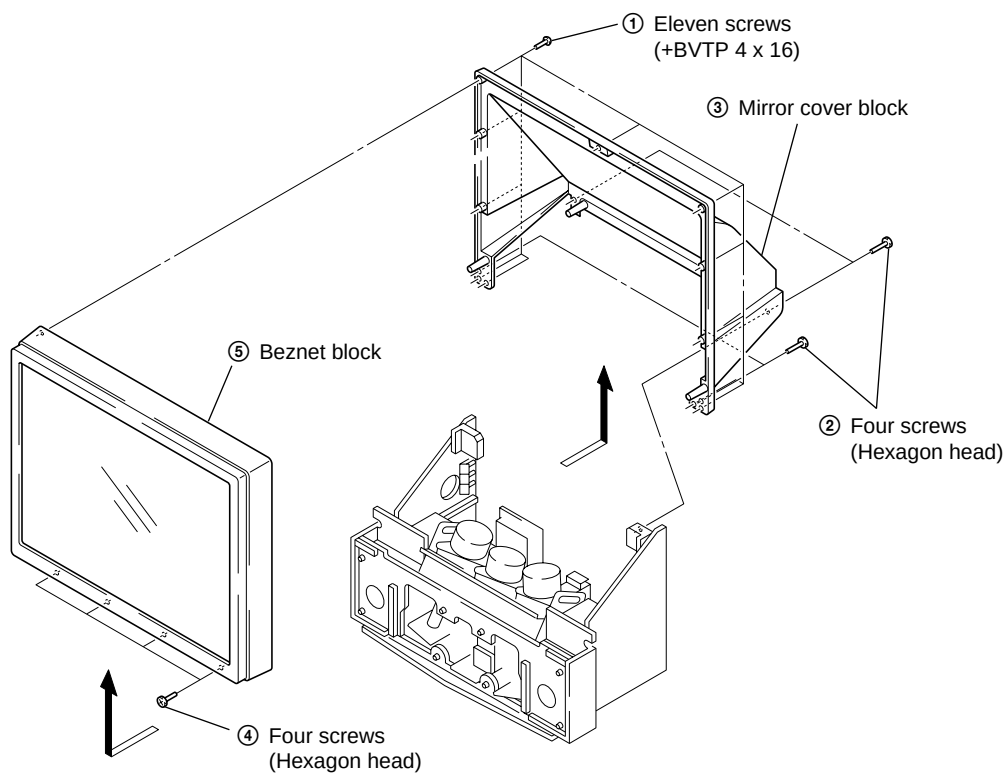


• KP-ES48/ES53/ES61

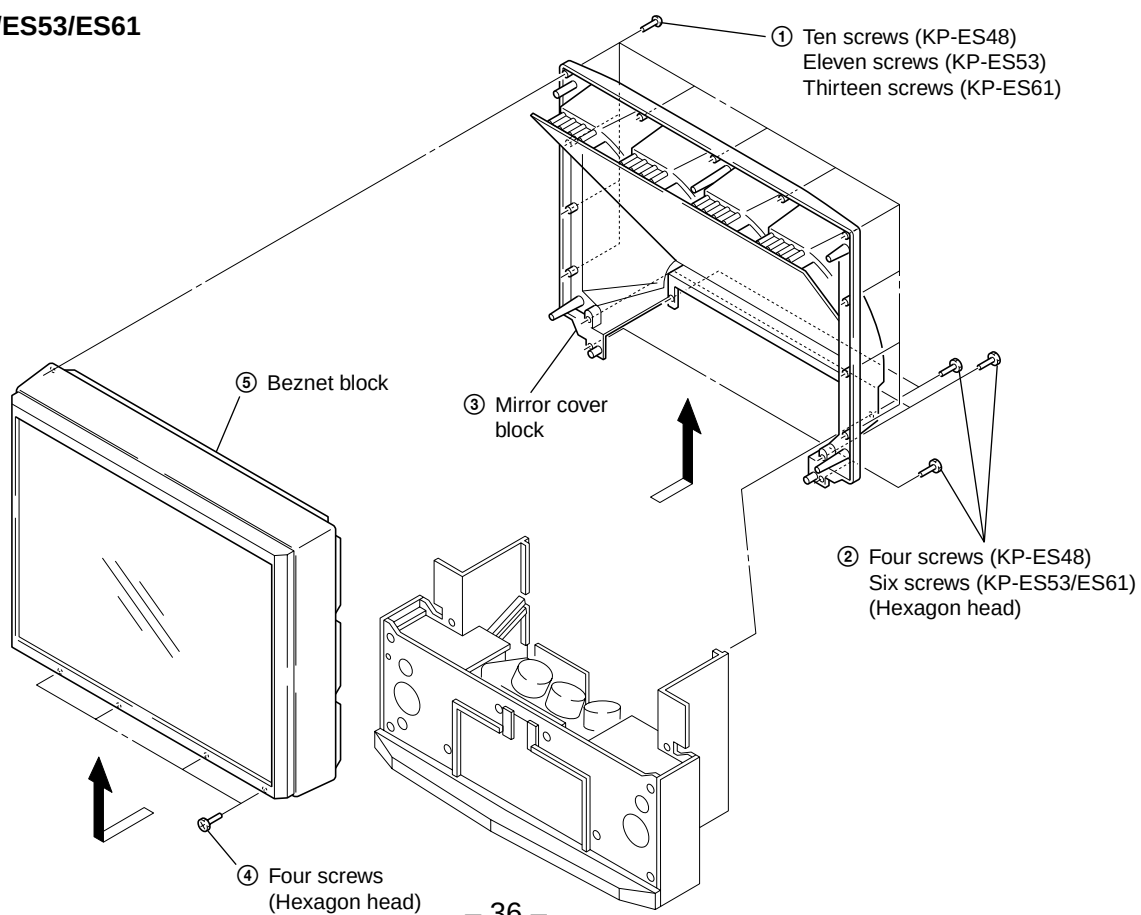


3-5. BEZNET BLOCK REMOVAL

• KP-ES43



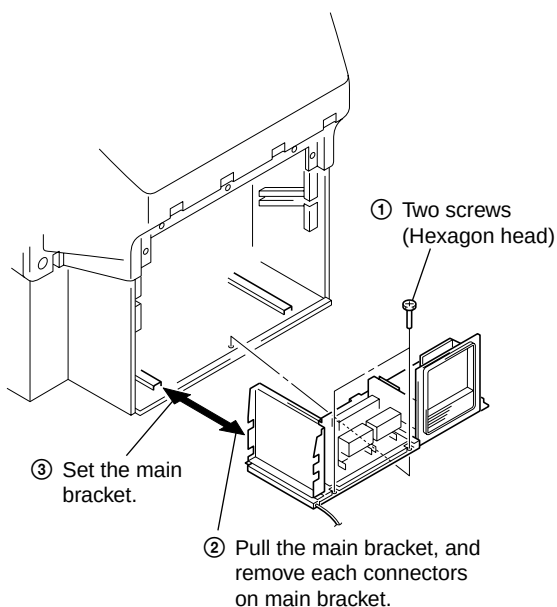
• KP-ES48/ES53/ES61



3-6. CHASSIS BLOCK REMOVAL

(1) MAIN BRACKET REMOVAL

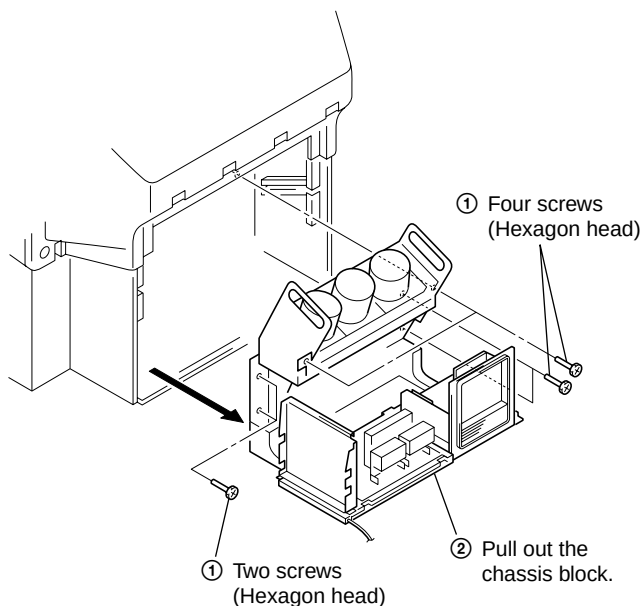
- KP-ES43/ES48/ES53/ES61



※ Pay particular attention to the wires of each Printed circuit boards when pulling out the main bracket.

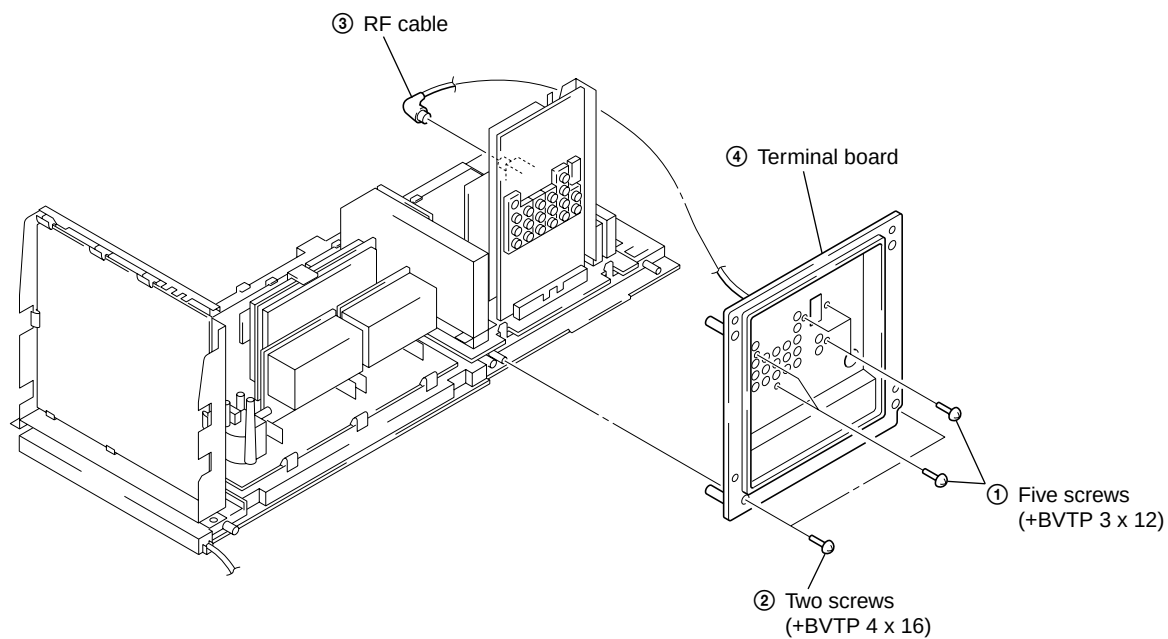
(2) CHASSIS BLOCK REMOVAL

- KP-ES43/ES48/ES53/ES61

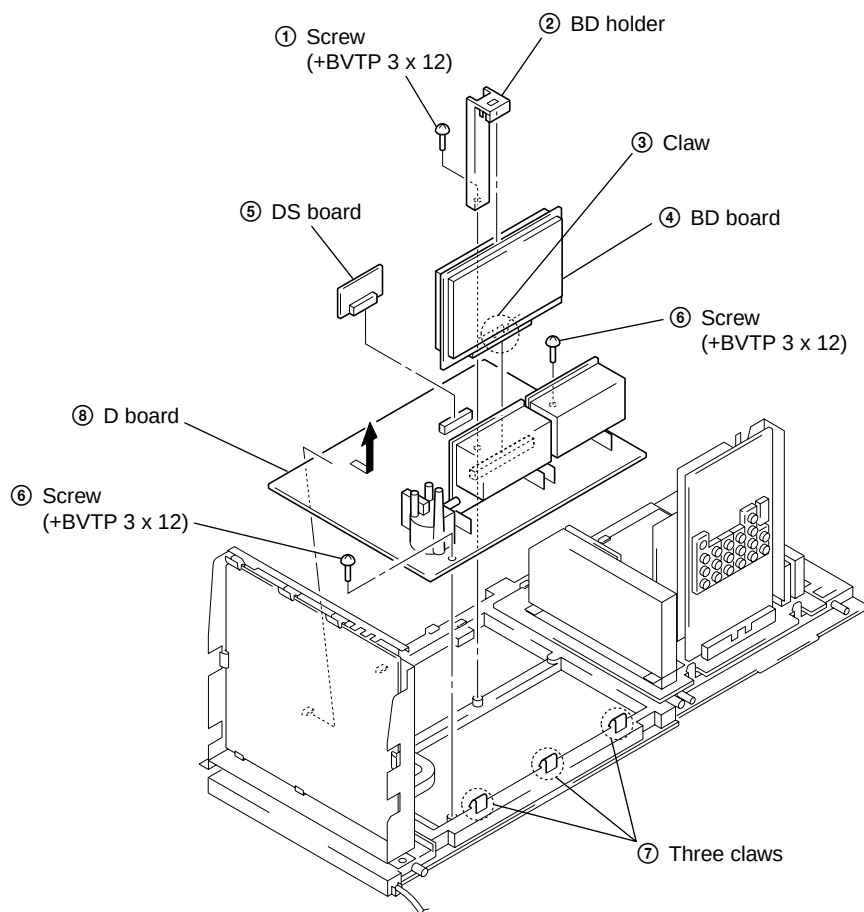


※ Pull out the chassis block by gripping the handles as shown in the diagram.
At this time, pay particular attention to the components removed in (1).

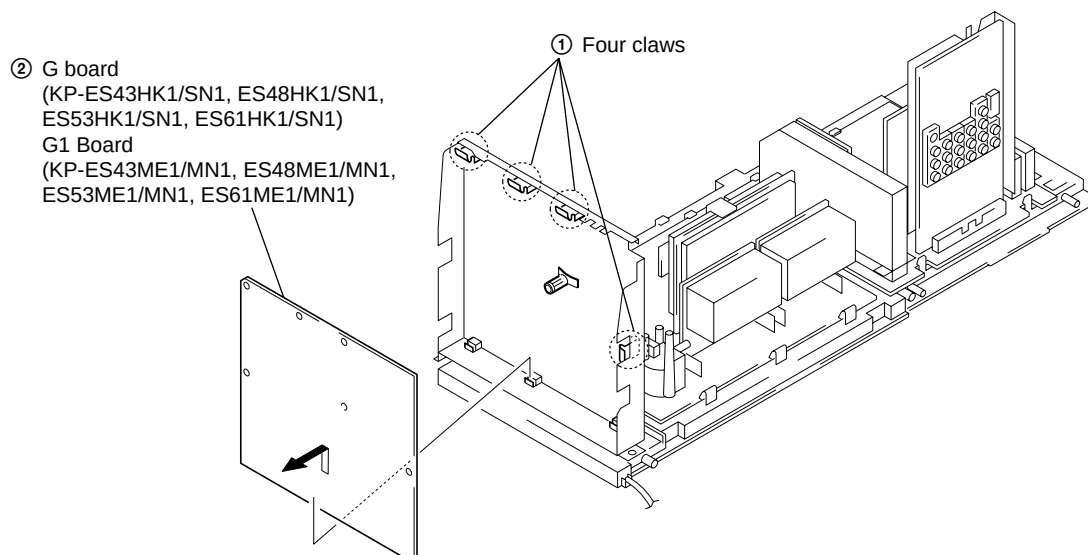
3-7. TERMINAL BOARD REMOVAL



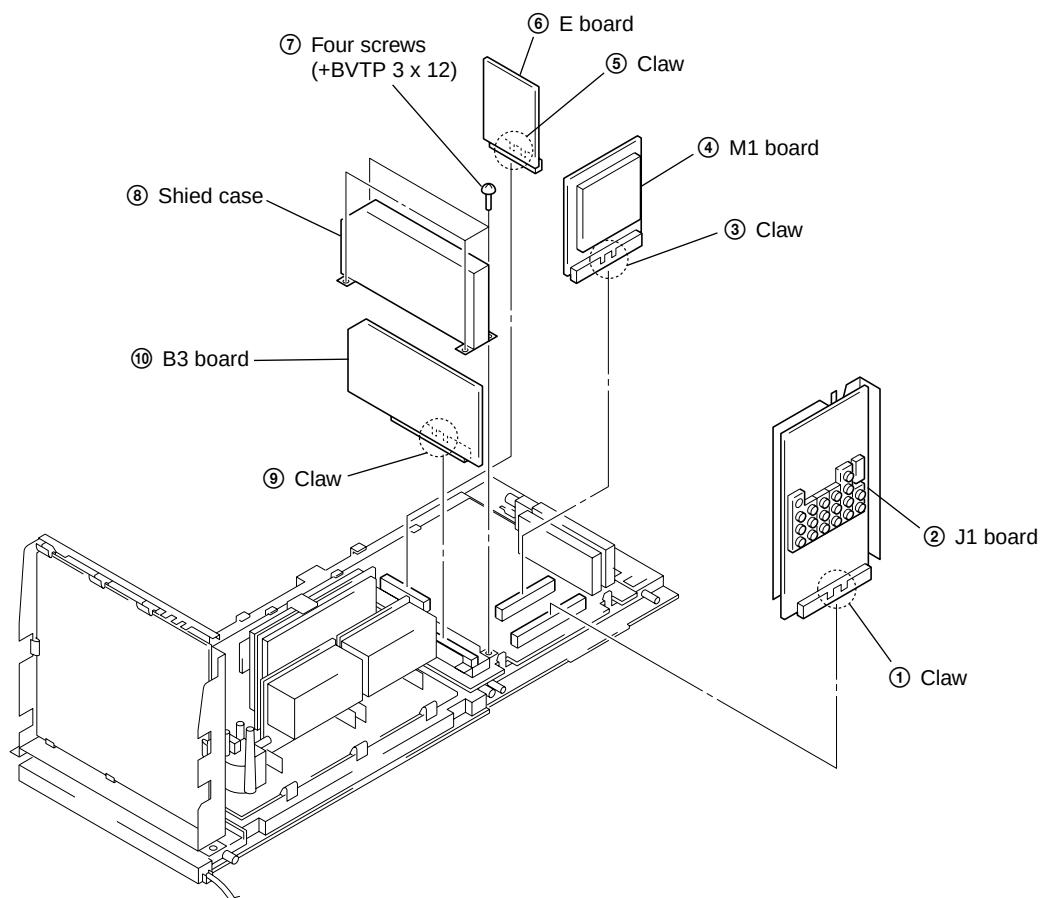
3-8. BD, DS, D BOARDS REMOVAL



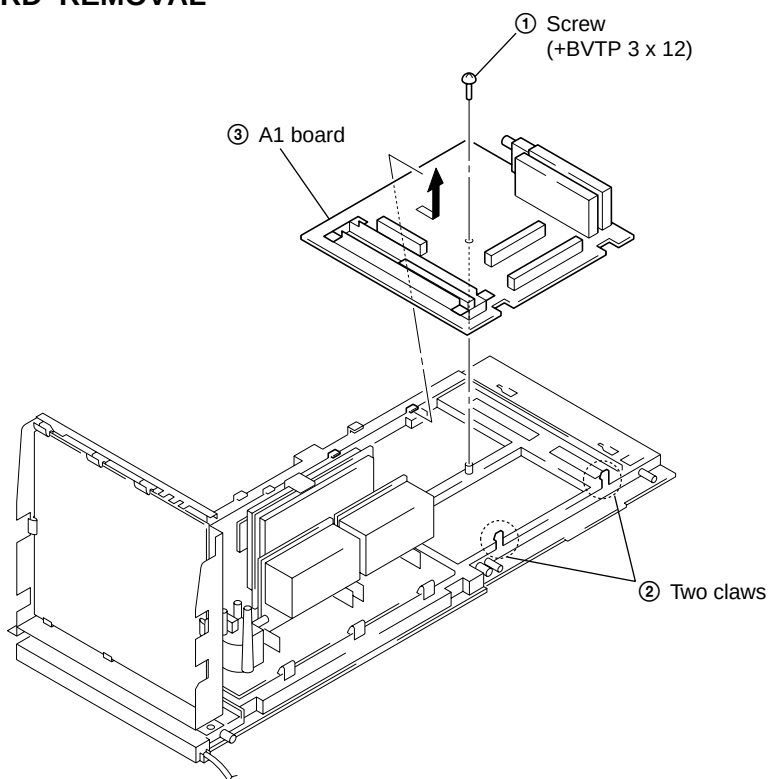
3-9. G, G1 BOARD REMOVAL



3-10. J1, B3, E, M1 BOARDS REMOVAL

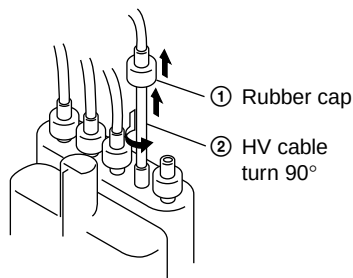


3-11. A1 BOARD REMOVAL

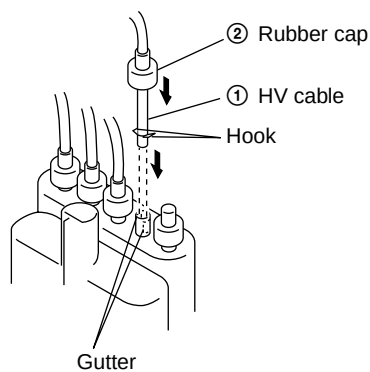


3-12. HIGH-VOLTAGE CABLE REMOVAL AND INSTALLATION

(1) Removal

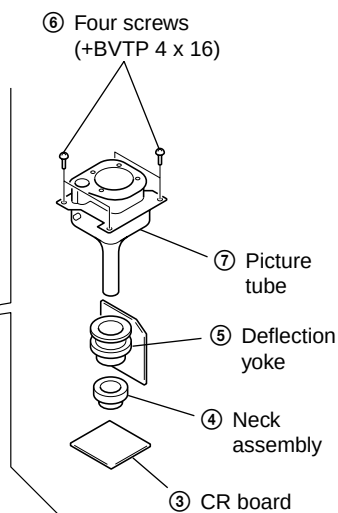
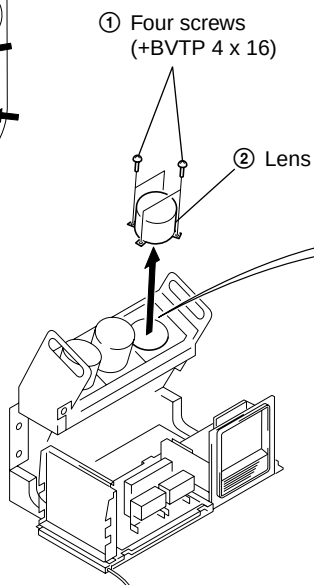
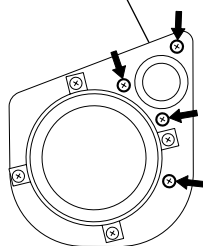


(2) Installation



3-13. PICTURE TUBE REMOVAL

Removing the arrow-marked screw is strictly inhibited.
If removed, it may cause liquid spill



SECTION 4

SET-UP ADJUSTMENTS

4-1. SCREEN VOLTAGE ADJUSTMENT (ROUGH ALIGNMENT)

1. Receive the Monoscope signal.
2. Set 50% BRIGHTNESS and minimum PICTURE.
3. Turn the red VR on the focus pack all the way to the left and then gradually turn it to the right until the point where you can see the retrace line.
4. Next gradually turn it to the left to the position where the retrace line disappears.

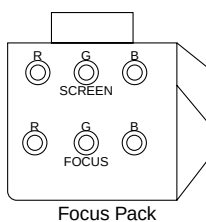


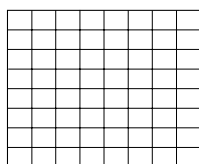
Fig. 4-1

4-2. SCREEN (G2) ADJUSTMENT

1. Turn on the power of the set.
2. Select VIDEO1 mode without signals.
3. Supply DC 175 $\pm$ 0.5 V from external power supply to TP7103 (KR), TP7203 (KG) or TP7303 (KB) of CR board, CG board and CB board.
3. Adjust red, green and blue screen voltage to until retrace line disappears with screen VR on the focus pack.

4-3. FOCUS ROUGH ADJUSTMENT

1. Loose the lens screw.
2. Set in the service mode. (Refer to SECTION 6.)
3. Place the caps on the red and blue lens so that only the green color is shown.
4. Press “①” or “④” button on the commander and select “PJE”, press “⑥” three times on the Commander to display the test signal (crosshatch) on the screen.



Test signal

Fig. 4-2

5. Rotate the green lens and align to obtain the best lens focus at the center area.
6. Rotate the green focus VR on the focus pack and align to obtain the best electrical focus in the top right corner.
7. Perform the same alignment for red and blue lenses and electric focus.
8. Fix lens screw.

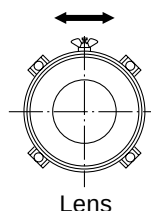


Fig. 4-3

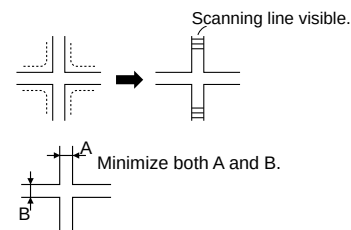
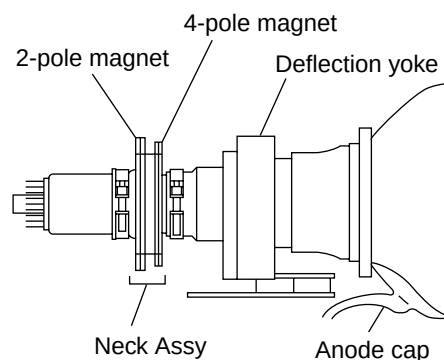


Fig. 4-4

4-4. DEFLECTION YOKE TILT ADJUSTMENT

1. Receive the Monoscope signal.
2. Place the caps on the red and blue lens so that only the green color.
3. Loosen the deflection yoke setscrew and align the tilt of the Deflection yoke so that the bars at the center of the monoscope pattern are horizontal.
4. After aligning the deflection yoke, fasten it securely to the funnel-shaped portion (neck) of the CRT.
5. The tilt of the deflection yoke for red and blue is aligned the same as was done for green.



Make sure deflection yoke is touching CRT closely.

Fig. 4-5

4-5. 2-POLE MAGNET ADJUSTMENT

1. Receive the Dot signal.
2. Place the caps on the red and blue lens so that only the green color is shown.
3. Turn the green focus VR on the focus pack to the right and set to over focus to enlarge the spot.
4. Now align the 2-Pole Magnet so that the enlarged spot is in the center of the just focus spot. (center of the dot doesn't move)
5. Align the green focus VR and set for just (precise) focus.
6. Perform the same alignment for red and blue.

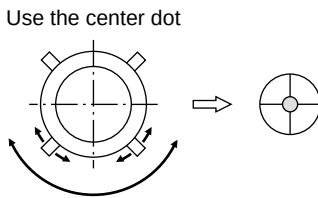


Fig. 4-6

4-6. 4-POLE MAGNET ADJUSTMENT

1. Receive the Dot signal.
2. Place the caps on the red and blue lens so that only the green color is shown.
3. Turn the green focus VR on the focus pack to the left and set to under focus to enlarge the spot.
4. Now align the 4-Pole Magnet so that the enlarged spot becomes a perfect circle.
5. Perform the same alignment for red and blue.

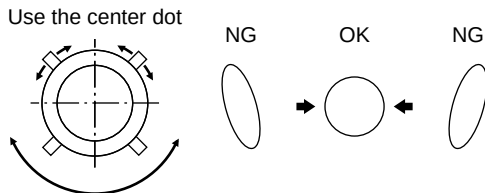


Fig. 4-7

4-7. GREEN, RED AND BLUE FOCUS ADJUSTMENT

4-7-1. Green, Red and Blue Lens Focus Adjustment

1. Receive the Monoscope signal.
2. Place the caps on the red and blue lens so that only the green color is shown.
3. Rotate the green lens and adjust to obtain the best lens focus at the center area.
4. Fix lens screw.
5. Repeat above process for red and blue.

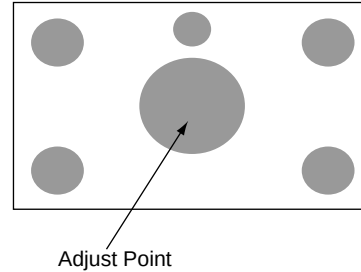


Fig. 4-8

4-7-2. Green, Red and Blue Electrical Focus Adjustment

1. Receive the Monoscope signal.
2. Place the caps on the red and blue lens so that only the green color is shown.
3. Rotate the green focus VR on the focus pack and adjust to obtain the best electrical focus in the adjust point.
4. Repeat above process for red and blue.
5. Repeat adjustment items 4-3. FOCUS ROUGH ADJUSTMENT, 4-5. 2-POLE MAGNET ADJUSTMENT, 4-6. 4-POLE MAGNET ADJUSTMENT and 4-7. GREEN, RED AND BLUE FOCUS ADJUSTMENT, and adjust to obtain the best focus.

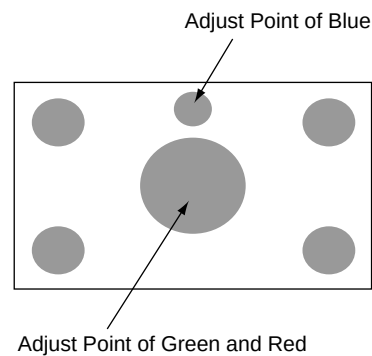


Fig. 4-9

SECTION 5
SAFETY RELATED ADJUSTMENT

When replacing the following components marked with  on the schematic diagram, always check hold-down voltage and if necessary re-adjust.

Part Replaced ()	
R9901	

Part Replaced ()	
D Board	C5117, C5123, C5127, C5143, D5115, D5204, Q5104, R5136, R5138, R5140, R9901, T5102, T5104, T5103 (FBT)
G Board	C6024, C6032, D6020

5-1. HV HOLD-DOWN ADJUSTMENT

1. Connect HV static voltmeter to HV Block.
2. Mount a resistor (R9901 : 43 kΩ, 1/4 W, METAL FILM) at CN5003.
3. Remove CN5002 and connect External Power Supply to CN5002 ① pin (+135 V) and ② pin (GND).
4. Turn on the set.

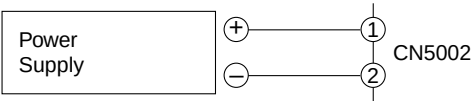


Fig. 5-1

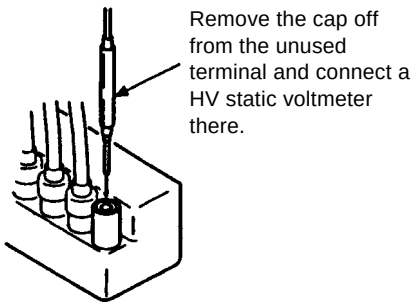


Fig. 5-2

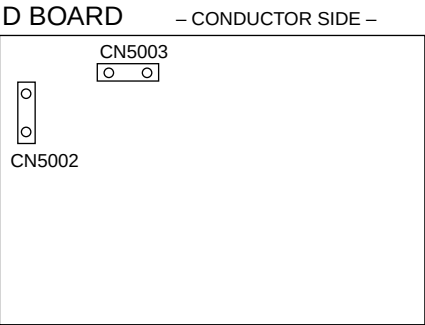


Fig. 5-3

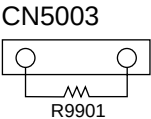


Fig. 5-4

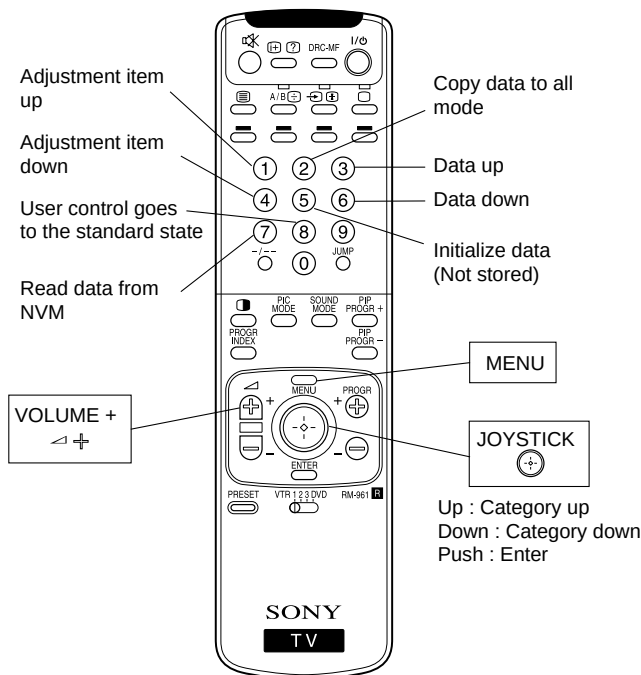
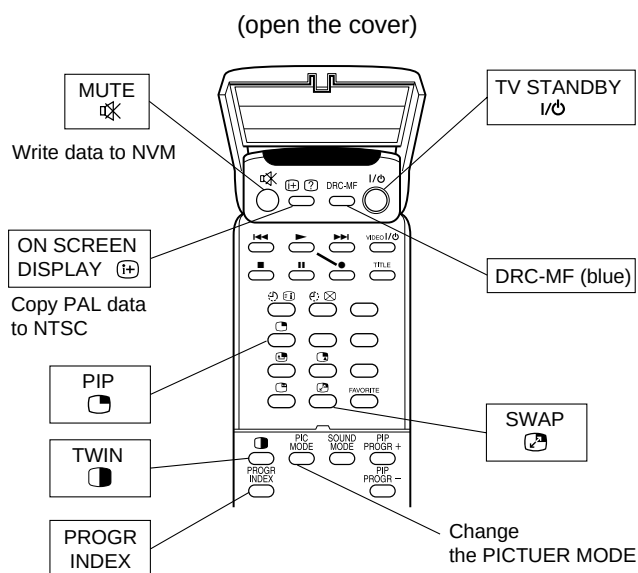
5. Receive the Dot signal and set PICTURE/BRIGHTNESS to minimum.
6. Slowly up the supply voltage from 0 V to 135 V until hold-down circuit works (picture disappear).
7. Read the HV static voltmeter of peak HV voltage.
Spec : 33.7 ~ 35.3 kV
8. If Hold-down voltage is less than 33.7 kV then replace R9901 of 43 kΩ with that of 39 kΩ, and check if the voltage is within the spec.
9. If hold-down voltage is over than 35.3 kV then replace R9901 of 43 kΩ with that of 47 kΩ, and check if the voltage is within the spec.

SECTION 6

ELECTRICAL ADJUSTMENTS

6-1. ADJUSTMENTS WITH COMMANDER

Service adjustment to this model can be performed with the supplied remote commander RM-961



RM-961

6-1-1. How to Select Each Mode

The adjustment requires the following modes:

	50 Hz (PAL)	60 Hz (NTSC)	WIDE 60 Hz (NTSC)
DRC1250	○	○	○
DRC100	○	○	×
PIP	○	○	○
TWIN	○	○	×
INDEX	○	○	×

1. Selection of Mode Between 50 Hz and 60 Hz

50 Hz : Enter the PAL signal.

60 Hz : Enter the NTSC signal.

WIDE 60 Hz : Enter the NTSC signal with video input

2. Selection of DRC Mode

- 1) Press “DRC-MF (blue)” button on the commander, repeatedly until displays the mode that you want to select on the screen.

Note : The DRC-MF mode is not selectable when using the “PROGRAM INDEX” or “FAVORITE CH” feature, or when the “GAME MODE”, “PIP”, or “TWIN” mode is turned “ON”.

3. Selection of WIDE mode

The WIDE mode is selected only when the DRC1250 of NTSC signal with video input mode is active.

- 1) Enter the NTSC signal with video input.
- 2) Press “DRC-MF (blue)” button on the commander to select “DRC1250”.
- 3) Press “MENU” button on the commander and move “” up or down to enter the “FEATURE” ▶ “WIDE MODE”.
- 4) Move “” up or down to select “ON” or “OFF”, and push “ (ENTER)” button.
- 5) Press “MENU” button to return to normal screen.

4. Selection of PIP mode

- 1) Open the remote control cover, press “ (PIP)” button on the commander.
- 2) Press “ (PIP)” button again to return to normal screen.

5. Selection of TWIN mode

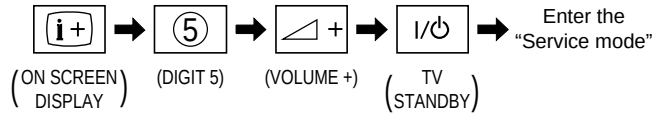
- 1) Press “ (TWIN)” button on the commander.
- 2) Press “ (TWIN)” button again to return to normal screen.

6. Selection of INDEX mode

- 1) Press “PROGR INDEX” button on the commander.
- 2) Press “PROGR INDEX” button again to return to normal screen.

6-1-2. How to Enter Service Mode

1. Turn on the main power switch to place this set in standby mode. (LED will light in red.)
2. Press the buttons on the commander as follows, and enter service mode.

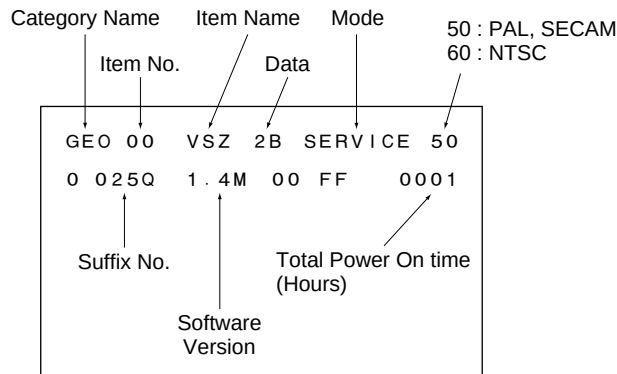


6-1-3. Method of Cancellation from Service Mode

1. Set the standby mode (Press "I/⏻ (TV STANDBY)" button on the commander), then press "I/⏻ (TV STANDBY)" button again, hereupon it becomes TV mode.

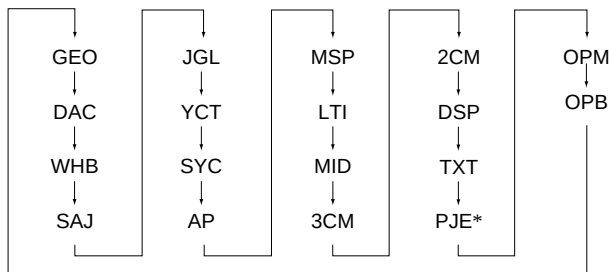
6-1-4. How to Adjustments

1. Set in the service mode, the following screen will appear.



2. Press "①" or "④" button on the commander to select the adjustment item.
3. Press "③" or "⑥" button on the commander to change the adjustment data.
4. Move "⬅" up or down to select the adjustment category.

When move "⬅" up (category up), service mode changes in the order as shown below.



* : When it moves from PJE to other categorys, repeat ① or ④ button and press it.

6-1-5. How to Write the Data

1. Set in the service mode.
2. Press "①" or "④" button on the commander, select the adjustment item, and press "③" or "⑥" button to change the data.
3. Press "🔇 (MUTE)" button on the commander and it will indicate "WRITE" on the screen.
4. Press "⓪" button on the commander to write into memory. (The "WRITE" display will be changed to red color while executing, and back to "SERVICE".)

Commander Function (Except PJE mode)

Button	Mode	Description
🔇 + ⓪	WRITE	Writes data to NVM.
⑦ + ⓪	READ	Reads data from NVM.
⑧ + ⓪	NORMAL	All user control goes to the standard.
⑤ + ⓪	INITIAL	Service data initialization. Not stored. (Be sure not to use usually)
② + ⓪	COPY	Copies and writes data of DRC1250 (50Hz) mode to all other modes.
Ⓜ + ⓪	WRT5060	Copies data of 50 Hz (PAL) mode to 60 Hz (NTSC) mode.

Note : Before changing to other modes, press "🔇 (MUTE)" + "⓪" buttons on the commander to write the data.

(Omission of this operation causes the data to be returned to the data before adjustment.)

: Confirm the adjustment mode before writing data for data values because to vary in each adjustment mode.

: The adjustment item that there are no relations in the adjustment is not to change data values because all items are written in each adjustment mode.

6-1-6. Memory Write Confirmation Method

1. After adjustment, pull put the plug from AC outlet, and then plug into AC outlet again.
2. Turn the power switch ON and set in service mode.
3. Call the adjustment items again to confirm adjustments were made.

6-2. SERVICE LIST

Note

- Common : The data value of each mode commonness. Others are set up by each mode.
-  : Shaded items are fixed data.
-  : Though data value is indicated on the screen, it is not used.
- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data :
Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory.
In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

OPTION NOTE

Category : **OPM**

Item : **COM** Comb Operation Selection 00 = automatic operation (depends on color system status)
01 = no comb operation
02 = forced 2D-comb operation
03 = forced 3D-comb operation

Item : **TSY** TV System Selection for Auto TV System 00 = B/G, 01 = I, 10 = D/K, 11 = M

Item : **SSO** Speed CH Search Selection 00 = normal, 01 = 4 times, 10 = 6 times, 11 = 8 times

Item : **TRP** MPEG/JPEG Noise Reduction

Bit	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
Input	—	—	TV	Video 1	Video 2	Video 3	Video 4	DVD

Category : **OPB**

OP1	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
Item	TOP	NICAM	HDEV	(reserved)	—	DVD Input	AV Input	
Data	1	1	1	0	0	1	1	1

AV Input 00 = no AV Input 01 = 1 AV Input
10 = 3 AV Input 11 = 4 AV Input

OP2	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
Item	C-Text	Korean Stereo	Korean Mode	A-TVsys	US ST	SSV Mode	OSD Language	
Data	0	0	0	1	0	0	1	1

C-Text Text Decoder Selection 0 = original, 1 = chinese
Korean Stereo* Korean Stereo 0 = disabled, 1 = enabled
Video NTSC 3.58* Video Color System 0 = Multi System, 1 = Single System
A-TVsys Auto TV System in Auto Program 0 = disabled, 1 = enabled
US ST* USA Stereo 0 = disabled, 1 = enabled
SSV Model SSV-production Model 0 = original, 1 = disable PIP/TWIN/Digital
OSD Language 00 = English only, 01 = English & Chinese, 10 = English & Arabic/Korean* 11 = English, Chinese & Arabic/Korean*

* : APPLICABLE FOR NTSC MODELS ONLY

V : WIDE (V-Compressed) mode

Category	Item		Function	Data Range	Standard Data														Device Name			
	No.	Name			50Hz (PAL)							60Hz (NTSC)								ECO Mode		
					DRC 1250	PIP	INDEX	TWIN	DRC 100	DRC 1250 V	PIP	PIP V	INDEX	TWIN	DRC 100	ECO ON	ECO OFF	ECO ON V		ECO OFF V		
GEO	00	VSZ	V SIZE	00 ~ 3F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F					CXA2100AQ
	01	VPS	V POSITION	00 ~ 3F	23	23	1F	1F	23	1F	1F	1F	1F	1F	1F	1F	1F					
	02	VLN	V LINEARITY	00 ~ 0F	07	07			07	07	07	07	07	07	07							
	03	SCO	S CORRECTION	00 ~ 0F	07	07			07	07	07	07	07	07	07							
	04	HSZ	H SIZE	00 ~ 3F	33	33	33	33	33	33	33	33	33	33	33	33	33					
	05	HPS	H POSITION	00 ~ 3F	37	37	37	37	37	37	37	37	37	37	37	37	37					
	06	DVH	H POSITION OFFSET FOR DVD	00 ~ 0F	09					07												
	07	PAP	PIN AMP	00 ~ 3F	22	22			22	22	22	22	22	22	22	22	22					
	08	UPN	UPPER CORNER PIN	00 ~ 3F	22	22	22	22	22	22	22	22	22	22	22	22	22					
	09	LPN	LOWER CORNER PIN	00 ~ 3F	22	22	22	22	22	22	22	22	22	22	22	22	22					
	0A	TRZ	TRAPEZIUM	00 ~ 0F	06	06	06	06	06	06	06	06	06	06	06	06	06					
	0B	AGL	AFC ANGLE	00 ~ 0F	07	07			07	07	07	07	07	07	07							
	0C	BOW	AFC BOW	00 ~ 0F	07	07			07	07	07	07	07	07	07							
	0D	LBL	LEFT H BLANKING	00 ~ 3F	34	34	34	34	34	34	34	34	34	34	34	34	34					
	0E	RBL	RIGHT H BLANKING	00 ~ 3F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F					
	0F	MPN	MIDDLE PIN DISTORTION COMPENSATION	00 ~ 03	00					00	00											
	10	UVL	UPPER V LINEARITY	00 ~ 0F	00					00												
	11	LVL	LOWER V LINEARITY	00 ~ 0F	00					00												
	12	HCP	HORIZONTAL HIGH VOLTAGE COMPENSATION	00 ~ 03	01					01	01											
	13	VCP	VERTICAL HIGH VOLTAGE COMPENSATION	00 ~ 03	00					00	00											
14	VAS	V ASPECT	00 ~ 3F	2F	2F	2F	2F	2F	2F	2C	2F	2C	2F	2C	2F	2F						
15	VSC	V SCROLL	00 ~ 3F	1F	1F	1F	1F	1F	1F	22	22	22	22	22	22	22						
16	USC	UNDER-SCAN MODE ON/OFF	00, 01	00					00	01												
17	VBW	V BLANKING WIDTH CONTROL	00 ~ 03	00	00				00	03	00	03				00						
18	AT1	AKB REFERENCE TIMING	00 ~ 03	00	00				00	00	00	00	00	00	00	00						
19	CPY	COPY THE GEO DATA TO ALL 50/60Hz NVM AREA	00, 01																			
DAC	00	HCT	H CENTER	00 ~ FF																	MB88141	
	01	HLN	H LINEARITY	00 ~ 3F																		
	02	MDP	MIDDLE PIN	00 ~ 3F																		
	03	CCP	LOWER CORNER PIN	00 ~ 3F																		
	04	HTR	HORIZONTAL TRAPEZIUM	00 ~ 3F																		
	05	DF	DF ON/OFF SWITCH	00, 01																		
	06	DPH	DF PHASE	00 ~ 3F																		
	07	QPH	QP PHASE	00 ~ 3F																		
	08	QAC	QP AMPLITUDE	00 ~ 3F																		
	09	QDC	QP DC LEVEL	00 ~ 3F																		
	0A	QDV	QP V MODULATION	00 ~ 3F																		
	0B	QAV	QP AMPLITUDE MODULATION	00 ~ 3F																		
	0C	ABC	ABL D/A CONTROL	00 ~ FF													00	00	00	7E	7E	
	0D	CPY	COPY THE DAC DATA TO ALL 50/60Hz NVM AREA	00, 01																		

Category	Item		Function	Data Range	Standard Data		Device Name
	No.	Name			Common		
WHB	00	CBO	DC OFFSET CANCELLER FOR CB1	00 ~ 0F	0A	CXA2100AQ	
	01	CRO	DC OFFSET CANCELLER FOR CR1	00 ~ 0F	0A		
	02	SBR	SUB BRIGHTNESS CONTROL	00 ~ 3F	25		
	03	RDR	R DRIVE	00 ~ 3F	29		
	04	GDR	G DRIVE	00 ~ 3F	29		
	05	BDR	B DRIVE	00 ~ 3F	29		
	06	RCT	R CUTOFF	00 ~ 3F	29		
	07	GCT	G CUTOFF	00 ~ 3F	1A		
	08	BCT	B CUTOFF	00 ~ 3F	29		
	09	SBO	SUB BRIGHTNESS OFFSET	00 ~ 3F	1F		
	0A	RDO	R DRIVE OFFSET	00 ~ 3F	1F		
	0B	GDO	G DRIVE OFFSET	00 ~ 3F	1F		
	0C	BDO	B DRIVE OFFSET	00 ~ 3F	1F		
	0D	RCO	R CUTOFF OFFSET	00 ~ 3F	1F		
	0E	GCO	G CUTOFF OFFSET	00 ~ 3F	1F		
	0F	BCO	B CUTOFF OFFSET	00 ~ 3F	1F		

V : WIDE (V-Compressed) mode

Category	Item		Function	Data Range	Standard Data																Device Name		
	No.	Name			Common	50Hz (PAL)			60Hz (NTSC)			Twin	Index	Picture Mode			ECO Mode						
						TV	Video	DVD	TV	Video	DVD			Dynamic	Standard	Hi-Fine	Personal	ECO ON	ECO OFF	ECO ON V		ECO OFF V	
SAJ	00	PIC	PICTURE CONTROL	00 ~ 3F											3F	2C	1C						
	01	BRT	BRIGHTNESS CONTROL	00 ~ 3F											21	1F	1B						
	02	COL	COLOR CONTROL	00 ~ 3F											27	1F	1F						
	03	HUE	HUE CONTROL	00 ~ 3F											1F	1F	1F						
	04	SHP	SHARPNESS CONTROL	00 ~ 3F											22	1F	1D						
	05	VML	VM LEVEL	00 ~ 03											03	03	02	03					
	06	DYC	DYNAMIC COLOR ON/OFF	00, 01											01	01	00	01					
	07	CTM	COLOR TEMPERATURE FOR DYNAMIC COLOR	00, 01											00	00	00	00					
	08	CAX	COLOR MATRIX SPECIFICATION	00 ~ 03			02																
	09	GMA	GAMMA CORRECTION	00 ~ 03											03	03	03	03					
	0A	DCT	DC TRANSMISSION CONTROL	00 ~ 03											01	00	00	00					
	0B	DPL	AUTO PEDESTAL LEVEL CONTROL	00 ~ 03											02	01	00	01					
	0C	ABM	ABL MODE CONTROL	00 ~ 03											01	00	00	00					
	0D	ABT	ABL CURRENT DETECTION Vth CONTROL	00 ~ 03															02	00	02	00	
0E	CLO	COLOR OFFSET	00 ~ 0F			07	07		0C	0C													
0F	CLW	COLOR STEP WIDTH TO THE CHANGE OF SIN	00 ~ 07	01																			
10	HUO	HUE OFFSET	00 ~ 0F			08	08		09	09													
11	SHO	SHARPNESS OFFSET	00 ~ 1F			0F	0F	0F	0C	0F	0F												
12	SHW	SHARPNESS STEP WIDTH TO THE CHANGE OF SIN	00 ~ 07	01																			
13	PIO	PICTURE OFFSET FOR TWIN/INDEX	00 ~ 07									07	07										
14	BRO	BRIGHTNESS OFFSET	00 ~ 0F																				
JGL	00	PON	RGB AND AKB REFERENCE PULSE OUTPUT ON/OFF	00, 01																			
	01	RGB	RGB OUTPUT SELECTION	00 ~ 07	07																		
	02	AGG	AGING MODE SELECTION	00 ~ 03	00																		
	03	DPS	Y/C DELAY LINE PASS MODE SWITCH	00, 01	00																		
	04	BBT	RGB BOTTOM LIMITER CONTROL	00 ~ 03	03																		
	05	LML	RGB AMPLITUDE LIMITER CONTROL	00 ~ 03	00																		
	06	PAB	DC LEVEL FOR PEAK ABL	00 ~ 0F	0F																		
	07	SCO	SUB PICTURE CONTROL	00 ~ 0F	07																		
	08	LV2	RGB LEVEL FOR RGB2	00 ~ 0F	06																		
	09	SFO	SHARPNESS CIRCUIT F0	00, 01		01	01	01	01	01	01												
	0A	PRO	PRE/OVER-SHOOT RATIO CONTROL	00 ~ 03		00	03	03	03	03	03												
	0B	LTI	LUMINANCE TRANSIENT IMPROVEMENT	00 ~ 03											02	02	00	02					
	0C	CTI	CHROMINANCE TRANSIENT IMPROVEMENT	00 ~ 03											01	01	00	01					

Category	Item		Function	Data Range	Standard Data							Video				Device Name
	No.	Name			Common	2D Comb	3D Comb	S-Input	others	TV	50Hz (PAL)	60Hz (NTSC)	50Hz (PAL)	60Hz (NTSC)	DVD	
YCT	00	TNT	TINT ADJUSTMENT FOR NTSC	00 ~ 3F						24			1F			CXA2123Q
	01	PNG	PAL/NTSC GATE WIDTH	00, 01	01											
	02	PNI	PAL/NTSC SENSITIVITY SW	00, 01	00											
	03	SCL	SUB COLOR CONTROL	00 ~ 0F						07	07	07	07	07		
	04	SCT	SUB CONTRAST CONTROL	00 ~ 0F						08	07	07	08	07		
	05	SF0	SHARPNESS CENTER FREQUENCY CHANGING	00 ~ 03	02											
	06	SEQ	SHARPNESS EQUALIZER CHARACTERISTIC	00 ~ 03	03											
	07	SHG	SHARPNESS GAIN CONTROL	00 ~ 0F						05	06	06	05	06	05	05
	08	YOL	Y-OUTPUT LEVEL CONTROL	00 ~ 3F	1F											
	09	BSP	BLACK STRETCH START POINT CHANGING	00 ~ 03	00											
	0A	COL	CB/CR OUTPUT LEVEL CONTROL	00 ~ 3F	1A											
	0B	DCR	DC RESTORATION RATIO ADJUSTMENT	00 ~ 03	00											
	0C	BF0	BPF/TQF F0 ADJUSTMENT	00 ~ 03	01											
	0D	BFQ	BPF/TQF Q ADJUSTMENT	00 ~ 03	02											
	0E	FSW	BPF/TQF SWITCH	00, 01	01											
	0F	SDT	SECAM DOUBLE TRAP SWITCH	00, 01	01											
	10	LPF	Y/CB/CR LPF SWITCH	00, 01	01											
	11	YDL	Y-DL TIME ADJUSTMENT	00 ~ 0F		06	05	05	03							
	12	CMT	CB/CR OUTPUT MUTE SWITCH	00, 01	00											
	13	B01	CB OFFSET ADJUSTMENT (MAIN ROUTE)	00 ~ 0F	07											
	14	R01	CR OFFSET ADJUSTMENT	00 ~ 0F	07											
	15	CDF	V COUNT DOWN FREQUENCY SWITCH	00 ~ 07	00											
	16	CDM	V COUNT DOWN JUDGE SWITCH	00 ~ 03	00											
	17	AFC	AFC SENSITIVITY SWITCH	00 ~ 03									00	00	00	
	18	MVM	MACROVISION MASK + AFC MASK	00, 01	00											
	19	SRY	SECAM R-Y BLACK ADJUSTMENT	00 ~ 0F	07											
	1A	SBY	SECAM B-Y BLACK ADJUSTMENT	00 ~ 0F	01											
	1B	BEL	SECAM BELL/HPF SWITCHING	00 ~ 03	02											
	1C	BLF	BELL F0 ADJUSTMENT	00, 01	00											
	1D	SVI	SECAM V-ID SWITCH	00, 01	00											
	1E	SGP	SECAM GATE POSITION ADJUSTMENT	00 ~ 03	00											
	1F	SID	SECAM SENSITIVITY SWITCH	00, 01	01											
	20	SIH	SECAM INHIBITION SWITCH	00, 01	00											
	21	STP	Y BLACK LEVEL SETUP FOR PAL PLUS	00, 01	00											
	22	HVC	H-VCO TEMPERATURE CHARACTER CANCELLING	00 ~ 03	02											
	23	3NR	3D NR OPERATION ON/OFF	00, 01	01											
	24	BW6	3D NR FOR 60Hz NON-BURST SIGNAL ON/OFF	00, 01	01											
	25	WSH	SHARPNESS GAIN STEP FOR NOISE REDUCTION	00 ~ 03	00											
	26	WCO	CB/CR OUTPUT LEVEL STEP FOR NOISE REDUCTION	00 ~ 03	00											

Category	Item		Function	Data Range	Standard Data										Device Name			
	No.	Name			Common	S-Input	Col Mode			TV		Video		DVD				
							SECAM	NTSC	PAL	50Hz (PAL)	60Hz (NTSC)	50Hz (PAL)	60Hz (NTSC)					
SYC	00	TNT	TINT ADJUSTMENT FOR NTSC	00 ~ 3F									21		20		CXA2123Q	
	01	PNG	PAL/NTSC GATE WIDTH	00, 01	01													
	02	PNI	PAL/NTSC SENSITIVITY SW	00, 01	00													
	03	SCL	SUB COLOR CONTROL	00 ~ 0F									06	06	07	08		07
	04	SCT	SUB CONTRAST CONTROL	00 ~ 0F									08	07	08	07		
	05	SFO	SHARPNESS CENTER FREQUENCY CHANGING	00 ~ 03	02													
	06	SEQ	SHARPNESS EQUALIZER CHARACTERISTIC	00 ~ 03	03													
	07	SHG	SHARPNESS GAIN CONTROL	00 ~ 0F	07													
	08	YOL	Y-OUTPUT LEVEL CONTROL	00 ~ 3F	1F													
	09	BSP	BLACK STRETCH START POINT CHANGING	00 ~ 03	00													
	0A	COL	CB/CR OUTPUT LEVEL CONTROL	00 ~ 3F	1A													
	0B	DCR	DC RESTORATION RATIO ADJUSTMENT	00 ~ 03	00													
	0C	BF0	BPF/TQF F0 ADJUSTMENT	00 ~ 03	01													
	0D	BFQ	BPF/TQF Q ADJUSTMENT	00 ~ 03	02													
	0E	FSW	BPF/TQF SWITCH	00, 01	01													
	0F	SDT	SECAM DOUBLE TRAP SWITCH	00, 01	01													
	10	LPF	Y/CB/CR LPF SWITCH	00, 01	01													
	11	YDL	Y-DL TIME ADJUSTMENT	00 ~ 0F		05	03	02	03							00		00
	12	NCM	1-H ADDITION SWITCH	00, 01	01													
	13	CMT	CB/CR OUTPUT MUTE SWITCH	00, 01	00													
	14	B01	CB OFFSET ADJUSTMENT (MAIN ROUTE)	00 ~ 0F	07													
	15	R01	CR OFFSET ADJUSTMENT	00 ~ 0F	07													
	16	CDF	V COUNT DOWN FREQUENCY SWITCH	00 ~ 07	00													
17	CDM	V COUNT DOWN JUDGE SWITCH	00 ~ 03	00											00	00		
18	AFC	AFC SENSITIVITY SWITCH	00 ~ 03															
19	MVM	MACROVISION MASK + AFC MASK	00, 01	00														
1A	SRV	SECAM R-Y BLACK ADJUSTMENT	00 ~ 0F	07														
1B	SBY	SECAM B-Y BLACK ADJUSTMENT	00 ~ 0F	01														
1C	BEL	SECAM BELL/HPF SWITCHING	00 ~ 03	02														
1D	BLF	BELL F0 ADJUSTMENT	00, 01	00														
1E	SVI	SECAM V-ID SWITCH	00, 01	00														
1F	SGP	SECAM GATE POSITION ADJUSTMENT	00 ~ 03	00														
20	SID	SECAM SENSITIVITY SWITCH	00, 01	01														
21	SIH	SECAM INHIBITION SWITCH	00, 01	00														
22	STP	Y BLACK LEVEL SETUP FOR PAL PLUS	00, 01	00														
23	HVC	H-VCO TEMPERATURE CHARACTER CANCELLING	00 ~ 03	02														

Category	Item		Function	Data Range	Standard Data								Device Name		
	No.	Name			Common	Sur VDD	Sur VDP	Sur TRS	Sur SIM	Sur OFF	Dynamic	Drama		Soft	
AP	00	BAS	BASS CONTROL	00 ~ 0F								0B	0A	07	TDA7315
	01	TRE	TREBLE CONTROL	00 ~ 0F								0A	09	07	
	02	LDN	LOUDNESS ON/OFF	00, 01		01									

Sur : Surround mode
VDD : Virtual Dolby Digital
VDP : Virtual Dolby Prologic
TRS : Tru Surround
SIM : Simulated

Category	Item		Function	Data Range	Standard Data		Device Name
	No.	Name			Common		
MSP	00	WST	W/G STEREO THRESHOLD	00 ~ FF	15		MSP3415D
	01	WBT	W/G BILINGUAL THRESHOLD	00 ~ FF	EA		
	02	WLL	W/G MONAURAL THRESHOLD	00 ~ FF	05		
	03	WAC	W/G AGREEMENT COUNT	00 ~ 0F	01		
	04	WDL	W/G SEARCH DELAY	00 ~ FF	30		
	05	NDL	NICAM SEARCH DELAY	00 ~ FF	20		
	06	SOL	STEREO STATUS READ DELAY	00 ~ FF	10		
	07	AGC	AGC SWITCH AUTO/CONSTANT	00, 01	01		
	08	REL	AGC GAIN AT CONSTANT MODE	00 ~ 3F	28		
	09	CRM	CARRIER MUTING ON/OFF	00, 01	00		
	0A	ACO	AUDIO CLOCK OUT ON/OFF	00, 01	01		
	0B	FP	FM PRESCALE FOR NON-M SYSTEM	00 ~ 7F	1B		
	0C	FPM	FM PRESCALE FOR M SYSTEM	00 ~ 7F	32		
	0D	FH	FM PRESCALE FOR HDEV	00 ~ 7F	2D		
	0E	FHM	FM PRESCALE FOR HDEV AND M	00 ~ 7F	65		
	0F	WGP	W/G PRESCALE	00 ~ 7F	2A		
	10	NIP	NICAM PRESCALE	00 ~ 7F	6D		
	11	ERR	AUTO FM SWITCH THRESHOLD	00 ~ FF	50		
	12	VOL	LOUD SPEAKER GAIN 0700h to 07FFh	00 ~ FF	6D		

Category	Item		Function	Data Range	Standard Data							Device Name		
	No.	Name			Common	Twin	TV	Video	Picture Mode					
									Dynamic	Standard	Hi-Fine		Personal	
LTI	00	LDH	HISTOGRAM SEGMENT SELECTION	00, 01	01								TDA9178	
	01	CFS	CONTOUR FILTER SELECTION	00, 01	01									
	02	WLB	LETTERBOX WINDOW SWITCH	00, 01	00									
	03	VDC	VIDEO DEPENDENT CORING	00, 01					01	01	01	01		
	04	DEM	DEMONSTRATION MODE	00, 01	00									
	05	CDP	LUMINANCE DELAY	00 ~ 07	04									
	06	OSP	OVERRULE SMART PEAKING	00, 01	00									
	07	WPO	WHITE POINT STRETCH OFF	00, 01	00									
	08	DSK	SKIN TONE SWITCH	00, 01										
	09	ASK	SKIN TONE ANGLE SELECTION	00, 01	00				00	00	00	00		
	0A	WSK	SKIN TONE WIDTH SELECTION	00, 01	00									
	0B	SSK	SKIN TONE SIZE SELECTION	00, 01	00									
	0C	DGR	GREEN ENHANCEMENT SWITCH	00, 01		00			*	01	00	01		
	0D	DGT	THRESHOLD OF GREEN ENHANCEMENT SWITCH	00 ~ 07	07									
	0E	GGR	GREEN ENHANCEMENT GAIN	00, 01	00									
	0F	WGR	GREEN ENHANCEMENT WIDTH	00, 01	00									
	10	SGR	GREEN ENHANCEMENT SIZE	00, 01	00									
	11	DBL	BLUE STRETCH SWITCH	00, 01	00									
	12	GBL	BLUE STRETCH GAIN SELECTION	00, 01	00									
	13	SBL	BLUE STRETCH SIZE SELECTION	00, 01	00									
	14	CDS	COLOR DEPENDENT SHARPNESS	00, 01						01	01	01		01
	15	CST	THRESHOLD OF COLOR DEPENDENT SHARPNESS	00 ~ 07	07									
	16	CTI	COLOR TRANSIENT IMPROVEMENT	00, 01					00	00	00	00		00
	17	BON	BLACK OFFSET COMPENSATION	00, 01					00	00	00	00		00
	18	BTD	ADAPTIVE BLACK STRETCH	00 ~ 3F					00	00	00	00		00
	19	NLD	NON-LINEARITY AMPLIFIER	00 ~ 3F						13	13	05		13
1A	NLW	STEP WIDTH OF NON-LINEARITY AMPLIFIER	00 ~ 07	07										
1B	VGD	VARIABLE GAMMA	00 ~ 3F		1F			15	15	1A	15	15		
1C	VGW	STEP WIDTH OF VARIABLE GAMMA	00 ~ 07	00										
1D	PKD	PEAKING AMPLITUDE	00 ~ 3F					32	32	1D	32	32		
1E	PKW	STEP WIDTH OF PEAKING AMPLITUDE	00 ~ 0F	08										
1F	SPD	STEEPNESS CORRECTION	00 ~ 3F						00	00	00	00		
20	CRD	CORING LEVEL	00 ~ 3F					14	0D	0D	05	14		
21	CRW	STEP WIDTH OF CORING LEVEL	00 ~ 0F	09										
22	CRO	CORING LEVEL OFFSET FOR VIDEO MODE	00 ~ 0F	05										
23	LWD	LINE WIDTH CORRECTION	00 ~ 3F	1F										
24	SNM	S/N MODE UNDER UNRELIABLE S/N CONDITION	00 ~ 07	00			03							
25	SNC	S/N RATIO AVERAGE COUNTER	00 ~ 0F											
26	FMC	FEATURE MODE MATCHING COUNTER	00 ~ 0F	02										

* Mark Data Value GE/HK/ME model: 01
AUS model: 00

Category	Item		Function	Data Range	Standard Data												Device Name
					50 Hz (PAL)						60 Hz (NTSC)						
	No.	Name			DRC1250	PIP	TWIN	INDEX	DRC100	DRC1250	PIP	TWIN	INDEX	DRC100			
MID	00	HPH	HORIZONTAL ACTIVE DISPLAY AREA PHASE	00 ~ FF	3E	3E	7B	78	3E	49	49	6F	6C	49	MB94918		
	01	VPH	VERTICAL ACTIVE DISPLAY AREA PHASE	00 ~ 3F	15	15	20	1A	0C	25	25	2E	2D	13			
	02	HSZ	HORIZONTAL ACTIVE DISPLAY AREA SIZE	00 ~ FF	7F	7F	7F	7F	7F	7F	7F	7F	7F	7F		7F	
	03	VSZ	VERTICAL ACTIVE DISPLAY AREA SIZE	00 ~ FF	7F	7F	7F	7F	7F	7F	7F	7F	7F	7F		7F	
	04	HPW	DISPLAY H-SYNC PULSE WIDTH	00 ~ 3F	3F	3F	3F	3F	3F	3F	3F	3F	3F	3F		3F	
	05	VPW	DISPLAY V-SYNC PULSE WIDTH	00 ~ 07	03	03	03	03	03	03	03	03	03	03		03	
	06	YDL	DISPLAY OUTPUT Y/C DELAY CORRECTION	00 ~ 3F	00	00	00	00	00	00	00	00	00	00		00	
	07	MHP	MAIN PICTURE HORIZONTAL POSITION (SINGLE & PIP)	00 ~ FF	7F	7F			7F	7F	7F			7F		7F	
	08	MVP	MAIN PICTURE VERTICAL POSITION (SINGLE & PIP)	00 ~ FF	7F	7F			7F	7F	7F			7F		7F	
	09	MHS	MAIN PICTURE HORIZONTAL SIZE (SINGLE & PIP)	00 ~ FF	7F	7F			7F	7F	7F			7F		7F	
	0A	MVS	MAIN PICTURE VERTICAL SIZE (SINGLE & PIP)	00 ~ FF	7F	7F			7F	7F	7F			7F		7F	
	0B	PHP	PIP SUB PICTURE HORIZONTAL POSITION	00 ~ FF		6B					53						
	0C	PVP	PIP SUB PICTURE VERTICAL POSITION	00 ~ FF		5E					57						
	0D	PHS	PIP SUB PICTURE HORIZONTAL SIZE	00 ~ FF		7F					7F						
	0E	PVS	PIP SUB PICTURE VERTICAL SIZE	00 ~ FF		7F					7F						
	0F	PHO	PIP SUB PICTURE HORIZONTAL POSITION OFFSET	00 ~ FF		76					68						
	10	PVO	PIP SUB PICTURE VERTICAL POSITION OFFSET	00 ~ FF		6E					6B						
	11	TMP	TWIN MAIN PICTURE HORIZONTAL POSITION	00 ~ 03			01										
	12	TSP	TWIN SUB PICTURE HORIZONTAL POSITION	00 ~ FF			00										
	13	TVP	TWIN MAIN & SUB PICTURE VERTICAL POSITION	00 ~ FF													
	14	THS	TWIN MAIN & SUB PICTURE HORIZONTAL SIZE	00 ~ FF													
	15	TVS	TWIN MAIN & SUB PICTURE VERTICAL SIZE	00 ~ FF													
	16	THO	TWIN MAIN & SUB PICTURE HORIZONTAL POSITION OFFSET	00 ~ FF													
	17	TVO	TWIN MAIN & SUB PICTURE VERTICAL POSITION OFFSET	00 ~ FF													
	18	XHS	INDEX SUB PICTURE HORIZONTAL SIZE	00 ~ FF													
	19	XVS	INDEX SUB PICTURE VERTICAL SIZE	00 ~ FF													
	1A	XHG	INDEX HORIZONTAL GAP WIDTH BETWEEN PICTURES	00 ~ FF													
	1B	XVG	INDEX VERTICAL GAP WIDTH BETWEEN PICTURES	00 ~ FF													
1C	XHP	INDEX 1st SUB PICTURE HORIZONTAL POSITION	00 ~ FF														
1D	XVP	INDEX 1st SUB PICTURE VERTICAL POSITION	00 ~ FF														
1E	DHP	DRC HORIZONTAL ACTIVE AREA POSITION	00 ~ FF	7F	7F	7F	7F	7F	7F	7F	7F	7F	7F	7F			
1F	DHS	DRC HORIZONTAL ACTIVE AREA PIXEL SIZE	00 ~ FF	7F	7F	7F	7F	7F	7F	7F	7F	7F	7F	7F			
20	DVP	DRC VERTICAL ACTIVE ARE LINE POSITION	00 ~ 3F	1A	1A	3F	3F	1A	1A	1A	39	39	1A	1A			
21	DVS	DRC VERTICAL ACTIVE AREA LINE SIZE	00 ~ FF	7F	7F	7F	7F	7F	7F	7F	7F	7F	7F	7F			
22	VHP	VDO HORIZONTAL ACTIVE AREA POSITION	00 ~ FF			7F	7F				7F						
23	VHS	VDO HORIZONTAL ACTIVE AREA PIXEL SIZE	00 ~ FF			7F	7F				7F						
24	VEP	VDO VERTICAL ACTIVE AREA EVEN POSITION	00 ~ 3F			1E	1E				1B						
25	VVS	VDO VERTICAL ACTIVE AREA LINE SIZE	00 ~ FF			7F	7F				7F						
26	VOP	VDO VERTICAL ACTIVE AREA ODD POSITION	00 ~ 03			00	00				00						
27	CLT	VDO CLAMP PULSE OUTPUT TIMING	00 ~ FF			7F	7F				7F						
28	CLW	VDO CLAMP PULSE WIDTH	00 ~ 07				04				04						
29	VVD	VDO ANALOG INPUT Y/C DELAY CORRECTION	00 ~ 3F			00	00				00						
2A	VCR	VDO CHROMA SIGNAL ORDER	00, 01			01	01				01						
2B	VDI	VDO DIGITAL ANGLE INPUT SELECTION	00 ~ 03			01	01				01						

Category	Item		Function	Data Range	Standard Data							Device Name				
	No.	Name			Common	TV	Video	NR Mode					Picture Mode			
								NR Mode 0	NR Mode 1	NR Mode 2	NR Mode 3		Dynamic	Standard	Hi-Fine	Personal
3CM	00	FRZ	EXTERNAL MEMORY TEST BIT	00, 01	00											
	01	NRM	NOISE REDUCTION OPERATION MODE	00 ~ 03	00											
	02	YCO	Y/C SINGLE OUTPUT SELECTION	00 ~ 0F	0D											
	03	SYC	SYSTEM CLOCK SELECTION	00 ~ 03	01											
	04	STD	STANDARD/NON-STANDARD OPERATION SELECTION	00 ~ 03	00											
	05	MSS	INTER-FRAME/INTER-LINE OPERATION SELECTION	00 ~ 03	00											
	06	KIL	KILLER/NON-KILLER OPERATION SELECTION	00 ~ 03	03											
	07	EAD	EXTERNAL Y-ADC SWITCH	00, 01	00											
	08	ECS	EXTERNAL C-SYNC INPUT SELECTION	00 ~ 03	01											
	09	CPP	ADC INPUT LEVEL & CLUMP PULSE WIDTH SELECTION	00 ~ 03	02											
	0A	PWR	ADC INPUT WIDTH SWITCH	00, 01	00											
	0B	HDP	HORIZONTAL PHASE ADJUSTMENT	00 ~ 07	05											
	0C	CDL	C-SIGNAL DELAY ADJUSTMENT	00 ~ 07	04											
	0D	DYC	DY DETECTION CORING LEVEL ADJUSTMENT	00 ~ 0F					02	02	02	04				
	0E	DYG	DY DETECTION GAIN ADJUSTMENT	00 ~ 0F					0A	0A	0A	0A				
	0F	DCC	DC DETECTION CORING LEVEL ADJUSTMENT	00 ~ 0F					05	03	03	05				
	10	DCG	DC DETECTION GAIN ADJUSTMENT	00 ~ 0F					05	0A	0A	05				
	11	YNR	YNR NON-LINEAR FILTER SETUP	00 ~ 0F	01											
	12	CNR	CNR NON-LINEAR FILTER SETUP	00 ~ 0F	01											
	13	WSC	NOISE DETECTION CORING ADJUSTMENT	00 ~ 03	01											
	14	VTH	HYSTERESIS SELECTION FOR H-SYNC NON-STANDARD	00 ~ 03		01	01									
	15	VTR	SENSITIVITY SELECTION FOR H-SYNC NON-STANDARD	00 ~ 03		01	01									
	16	LDR	SENSITIVITY SELECTION FOR FRAME-SYNC NON-STANDARD	00 ~ 03		02	01									
	17	VAP	GAIN ADJUSTMENT FOR VERTICAL SHAPE CORRECTION	00 ~ 07									03	02	00	02
	18	VAI	VANISHING ADJUSTMENT FOR VERTICAL SHAPE CORRECTION	00 ~ 1F									0C	06	00	06
	19	TST	TEST BIT	00, 01	00											
	1A	YPF	CENTER FREQUENCY SELECTION FOR Y-PEAKING BPF	00 ~ 03									03	03	03	03
	1B	YPG	GAIN ADJUSTMENT FOR Y-PEAKING BPF	00 ~ 0F									08	08	08	08
	1C	VSE	LINE COMB FILTER SETUP	00 ~ 0F	0A											
	1D	CCN	C-SIGNAL SPLIT FILTER SWITCH	00, 01	00											
	1E	COS	C-SIGNAL DELAY SWITCH AT NOISE REDUCTION	00, 01	00											
	1F	SDC	DC DETECTION SENSITIVITY SWITCH	00, 01	00											

Category	Item		Function	Data Range	Standard Data										Device Name	
	No.	Name			Common	TV	Video	NR Mode				Picture Mode				
								NR Mode 0	NR Mode 1	NR Mode 2	NR Mode 3	Dynamic	Standard	Hi-Fine		Personal
3CM	20	SDY	DY DETECTION LOWER-LEVEL SENSITIVITY SWITCH	00, 01	01											μPD64082
	21	D2G	D2 GAIN SELECTION	00 ~ 07	04											
	22	YHC	Y-SIGNAL HIGHER-LEVEL CORING SELECTION	00 ~ 03							00	00	00	00	00	
	23	YHG	Y-SIGNAL HIGHER-LEVEL GAIN SWITCH	00, 01							00	00	00	00	00	
	24	SHT	NON-STANDARD DETECTION & HV COUNTER TEST BITS	00 ~ 0F	00											
	25	CLK	CLOCK TEST BITS	00 ~ 0F	08											
	26	PLL	PLL FILTER SETUP	00 ~ 0F	0D											
	27	KRF	KILLER DETECTION REFERENCE ADJUSTMENT	00 ~ 0F	03											
	28	HSL	H-SYNC SLICE LEVEL ADJUSTMENT	00 ~ 0F	0C											
	29	VSL	V-SYNC SLICE LEVEL ADJUSTMENT	00 ~ 0F	08											
	2A	BPS	INTERNAL BURST GATE START POSITION ADJUSTMENT	00 ~ 0F	04											
	2B	BPW	INTERNAL BURST GATE WIDTH ADJUSTMENT	00 ~ 0F	0A											
	2C	ADC	ADC CLOCK DELAY SELECTION	00 ~ 03	03											
	2D	APD	ADC POWER-DOWN SWITCH	00, 01	01											
	2E	NSD	NON-STANDARD DETECTION TEST BIT	00, 01	01											
	2F	SPD	MEMORY POWER-DOWN SWITCH	00 ~ 03	02											
	30	CNT	CNR TEST BIT	00, 01	00											
	2CM	00	APA	2D COMB APACON ON/OFF	00, 01											

Category	Item		Function	Data Range	Standard Data								Device Name	
	No.	Name			Common	Sur VDD	Sur VDP	Sur TRS	Sur SIM	Sur OFF	Dynamic	Drama		Soft
DSP	00	DUL	DIR UNLOCK DETECTION MODE	00 ~ 03										
	01	DIM	DIGITAL INPUT MODE	00 ~ 03										
	02	TFM	TruSurround FRONT MINUS	00 ~ 7F										
	03	TFP	TruSurround FRONT PLUS	00 ~ 7F										
	04	TCE	TruSurround CENTER	00 ~ 7F										
	05	TS1	TruSurround SURROUND #1	00 ~ FF										
	06	TS2	TruSurround SURROUND #2	00 ~ 7F										
	07	TSP	TruSurround SURROUND PLUS	00 ~ 7F										
	08	TSM	TruSurround SURROUND MINUS	00 ~ 7F										
	09	LFE	LOW FREQUENCY EFFECT	00 ~ 7F										
	0A	BHL	BBE EFFECT 1 FOR BBE HIGH	00 ~ 7F										
	0B	BHH	BBE EFFECT 2 FOR BBE HIGH	00 ~ 7F										
	0C	BLL	BBE EFFECT 1 FOR BBE LOW	00 ~ 7F										
	0D	BLH	BBE EFFECT 2 FOR BBE LOW	00 ~ 7F										
	0E	DLR	DELAY SELECTION AT DSP RESET (100msec to 1500msec)	00 ~ 07										
	0F	BBE	BBE SELECTION	00 ~ 03										

Sur : Surround mode
 VDD : Virtual Dolby Digital
 VDP : Virtual Dolby Prologic
 TRS : Tru Surround
 SIM : Simulated

Category	Item		Function	Data Range	Standard Data			Device Name
	No.	Name			Common	50 Hz (PAL)	60 Hz (NTSC)	
TXT	00	TXH	TELETEXT HORIZONTAL POSITION	00 ~ FF	61			SAA5261
	01	TXV	TELETEXT VERTICAL POSITION	00 ~ 3F	0E			

KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1 RM-961

Category : PJE

: Fixed data

Item Number	Adjustment Item	Data Range	Standard Data					Name/Description
			DRC1250 (PAL)	DRC100 (PAL)	DRC1250 (NTSC)	DRC100 (NTSC)	DRC1250 VC (NTSC)	
00	FDIS	00,01	00					SELECT REGI DATA DISPLAY OF FINE ADJ
01	OSDH	01 ~ 255	32	32	32	32	32	PJED SERVICE MENU H POSITION
02	OSDV	01 ~ 255	75	55	75	55	65	PJED SERVICE MENU V POSITION
03	FVST	00 ~ 255	54	33	54	33	54	LINE NUMBER OF FINE ADJUST START
04	V1ST	00 ~ 255	00	00	00	00	00	V1 START DATA
05	V1CU	00 ~ 255	25	50	29	58	29	V1 COUNT UP DATA
06	COHP	00 ~ 255	00	00	00	00	00	H-PHASE OF ROUGH ADJ
07	FIHP	00 ~ 255	203	203	203	203	203	H-PHASE OF FINE ADJ
08	TPHP	00 ~ 255	51	51	51	51	51	H-PHASE OF TEST PATTERN
09	DFHP	00 ~ 255	00	00	00	00	00	H-PHASE OF DYNAMIC FOCUS
10	DFHG	-128 ~ 127	-80	-80	-80	-80	-80	H-2 GAIN OF DYNAMIC FOCUS
11	DFVG	-128 ~ 127	-30	-30	-30	-30	-30	V-2 GAIN OF DYNAMIC FOCUS
12	PWM1	00 ~ 255	00					PWM1
13	PWM2	00 ~ 255	29					H-PHASE OF AUTO REGI TEST PATTERN
14	HBLD	00 ~ 255	00					H-PHASE OF RETURNED BLUE V LINE
15	HBLW	00 ~ 63	00					PULSE WIDTH OF RETURNED BLUE V LINE
16	BLKP	00 ~ 255	44					START BLANK PULSE
17	COGV	-128 ~ 127	(*1)					GREEN V CENT OFFSET DATA OF AUTO REGI
18	CORV	-128 ~ 127	(*1)					RED V CENT OFFSET DATA OF AUTO REGI
19	COBV	-128 ~ 127	(*1)					BLUE V CENT OFFSET DATA OF AUTO REGI
20	COGH	-128 ~ 127	(*1)					GREEN H CENT OFFSET DATA OF AUTO REGI
21	CORH	-128 ~ 127	(*1)					RED H CENT OFFSET DATA OF AUTO REGI
22	COBH	-128 ~ 127	(*1)					BULE H CENT OFFSET DATA OF AUTO REGI
23	SOGV	-128 ~ 127	(*1)					GREEN V SKEW OFFSET DATA OF AUTO REGI
24	SORV	-128 ~ 127	(*1)					RED V SKEW OFFSET DATA OF AUTO REGI
25	SOBV	-128 ~ 127	(*1)					BLUE V SKEW OFFSET DATA OF AUTO REGI
26	SOGH	-128 ~ 127	(*1)					GREEN H SKEW OFFSET DATA OF AUTO REGI
27	SORH	-128 ~ 127	(*1)					RED H SKEW OFFSET DATA OF AUTO REGI
28	SOBH	-128 ~ 127	(*1)					BLUE H SKEW OFFSET DATA OF AUTO REGI
29	ERR	FIXED	00					AUTO REGI ERROR CODE
30	ADTM	00 ~ 255	144					TIMING TO GET A/D DATA OF AUTO REGI
31 *2	VUP	01 ~ 255	03	03	01	01	01	AUTO REGI PATTERN UPPER V POSITION
32 *2	VMID	01 ~ 255	135	130	115	110	115	AUTO REGI PATTERN MIDDLE V POSITION
33 *2	VLOW	01 ~ 255	260	255	225	212	225	AUTO REGI PATTERN LOWER V POSITION
34 *2	HPR	01 ~ 510	03	03	01	01	03	AUTO REGI PATTERN H POSITION
35	SFTF	00,01	00					SHIFT ENABLE 00 : DISABLE 01 : ENABLE
36	SFTE	00,01	00					SHIFT FAST 00 : NORMAL 01 : QUICK
37	ACTL	00 ~ 255	00					LOWER BYTE OF COUNTER VALUE
38	ACTH	00 ~ 255	00					HIGHER BYTE OF COUNTER VALUE
GRN	CENT	-512 ~ 511	000/000					GREEN H/V CENT (H CENT *3)
	SKEW	-512 ~ 511	000/000					GREEN H/V SKEW (H SKEW *3)
	SIZE	-512 ~ 511	000/-200					GREEN H/V SIZE (H/V SIZE *3)
	LIN	-512 ~ 511	xxxx/xxxx					GREEN H/V LIN
	KEY	-512 ~ 511	xxxx/xxxx					GREEN H/V KEY
	PIN	-512 ~ 511	xxxx/270					GREEN H/V PIN
BLU	CENT	-512 ~ 511	000/000					BLUE H/V CENT
	SKEW	-512 ~ 511	000/000					BLUE H/V SKEW
	SIZE	-512 ~ 511	000/-200					BLUE H/V SIZE
	LIN	-512 ~ 511	-150/xxxx					BLUE H/V LIN
	KEY	-512 ~ 511	xxxx/-70					BLUE H/V KEY
	PIN	-512 ~ 511	xxxx/270					BLUE H/V PIN
RED	CENT	-512 ~ 511	000/000					RED H/V CENT
	SKEW	-512 ~ 511	000/000					RED H/V SKEW
	SIZE	-512 ~ 511	000/-200					RED H/V SIZE
	LIN	-512 ~ 511	150/xxxx					RED H/V LIN
	KEY	-512 ~ 511	xxxx/-70					RED H/V KEY
	PIN	-512 ~ 511	xxxx/270					RED H/V PIN

VC : WIDE (V-Compressed) MODE

*3 : It can be adjust Green a little.

*1 : Set correctly by the automatic registration adjustment.

xxxx : Cannot change.

*2 : It can be adjust if automatic registration adjustment doesn't work.

Category	Item		Function	Data Range	Standard Data			Device Name
	No.	Name			Common	50 Hz (PAL)	60 Hz (NTSC)	
OPM	00	OSH	OSD H POSITION	00 ~ 3F	0F			CXP750096 OPTION-MISC
	01	FW1	OSD ODD/EVEN FIELD WINDOW SETUP #1	00 ~ 3F	00			
	02	FW2	OSD ODD/EVEN FIELD WINDOW SETUP #2	00 ~ 3F	03			
	03	OHO	OSD H POSITION OFFSET FOR INDEX	00 ~ 0F	07			
	04	IL1	INDEX SUB-SCREEN OSD 1st LINE VERTICAL POSITION	00 ~ 3F		22	20	
	05	IYO	INDEX SUB-SCREEN OSD VERTICAL OFFSET	00 ~ 3F		2B	20	
	06	COM	COMB OPERATION SELECTION	00 ~ 03	00			
	07	APC	APC SWITCH	00, 01	01			
	08	TSY	TV SYSTEM SELECTION UNDER SEARCHING WITH AUTO TV SYSTEM	00 ~ 03	00			
	09	MUT	NO SIGNAL MUTE	00, 01	00			
	0A	AFM	AUTO FM SWITCH	00, 01	01			
	0B	TVO	V-ANGLE CORRECTION TO PICTURE ROTATION	00 ~ 07	03			
	0C	DBL	DISABLE BLUEBACK FUNCTION	00, 01	01			
	0D	SSO	SPEED CH SEARCH SELECTION	00 ~ 03	01			
	0E	TRP	MPEG/JPEG NOISE REDUCTION FOR EACH INPUT	00 ~ 3F	00			
	0F	SCH	CH SELECTION FOR SHIPPING CONDITION	00 ~ 7F				
OPB	10	SCA	CABLE/AIR SELECTION FOR SHIPPING CONDITION	00, 01				
	11	DMG	DISABLE MENU-OPERATION GUIDE	00, 01	00			
	12	VSN	ENABLE NOISE REDUCTION IN VIDEO MODE	00, 01	00			
	00	OP1	OPTIONAL BITS 1 (SEE THE SPECIFIED SHEET)	00 ~ FF	E7			
	01	OP2	OPTIONAL BITS 2 (SEE THE SPECIFIED SHEET)	00 ~ FF	13			

6-3. Picture Quality Adjustment

6-3-1. Preparation

1. Set in the service mode.
2. Set respective items as follows.

Adjustment Condition

DRC-MF : DRC1250
PICTURE MODE : HI-FINE
TWIN MODE : ON
ECO MODE : OFF
WIDE MODE : OFF

Category	Item	Data
SAJ	00 PIC	3F
	06 DYC	00
	0E CLO	06
	10 HUO	07
	13 PIO	00
JGL	04 BBT	00
	05 LML	03

3. Connect the oscilloscope probe to the following point on the E board.

Measurement Point

E Board CN4500 :

- ① pin R100 → VR
⑤ pin B100 → VB

Note : After the adjustment 6-3. Picture Quality Adjustment, these adjustment parameters must be recovered to the original condition.

Original Condition

DRC-MF : DRC1250
PICTURE MODE : HI-FINE
TWIN MODE : ON
ECO MODE : OFF
WIDE MODE : OFF

Category	Item	Data			
		50 TV	50 VIDEO	60 TV	60 VIDEO
SAJ	00 PIC	1F			
	06 DYC	00			
	0E CLO	0C	0C	0C	0C
	10 HUO	08	08	09	09
	13 PIO	07			
JGL	04 BBT	03			
	05 LML	00			

6-3-2. NTSC Video Input

1. Enter the NTSC video color bar (White & color 75%) signal.
2. Enter the service mode, and set respective items as follows.
3. Measure waveform, and each item is adjusted to become the following figure.
4. Press “ (SWAP)” button on the commander, when the left screen and the right screen are changed.
5. After adjustment finished, press “ (MUTE)” + “” button to write the data to the NVM.

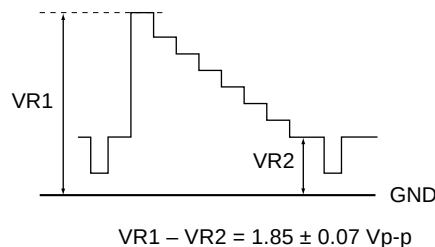
(i) SUB CONTRAST

Condition :

Category	Item	Data
SAJ	00 PIC	3F
	02 COL	00
	13 PIO	00
JGL	01 RGB	04

Adjusting Parameter :

LEFT screen : YCT 08 YOL
RIGHT screen : SYC 08 YOL



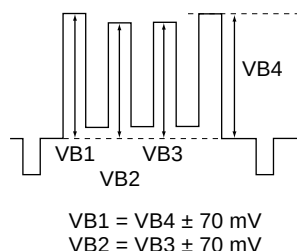
(ii) SUB HUE/SUB COL

Condition :

Category	Item	Data
SAJ	02 COL	1F
	10 HUO	07
JGL	01 RGB	07

Adjusting Parameter :

LEFT screen : YCT 0A COL
00 TNT
RIGHT screen : SYC 0A COL
00 TNT



6-3-3. NTSC RF Input

1. Enter the NTSC RF color bar (White & color 75%) signal.
2. Adjust with the same manner as 6-3-2. NTSC Video Input.

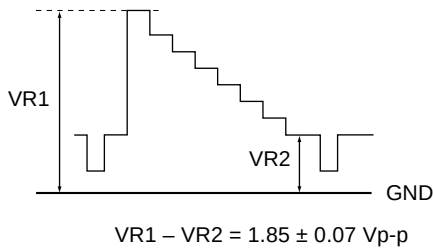
(i) SUB CONTRAST

Condition :

Category	Item	Data
SAJ	00 PIC	3F
	02 COL	00
JGL	01 RGB	04

Adjusting Parameter :

LEFT screen : YCT 04 SCT
RIGHT screen : SYC 04 SCT



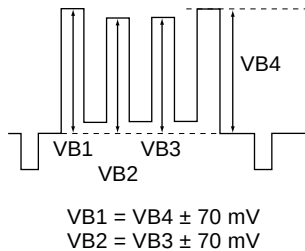
(ii) SUB HUE/SUB COL

Condition :

Category	Item	Data
SAJ	02 COL	1F
	10 HUO	07
JGL	01 RGB	07

Adjusting Parameter :

LEFT screen : YCT 03 SCL
00 TNT
RIGHT screen : SYC 03 SCL
00 TNT



6-3-4. PAL Video Input

1. Enter the PAL video color bar (White & color 75%) signal.
2. Adjust with the same manner as 6-3-2. NTSC Video Input.

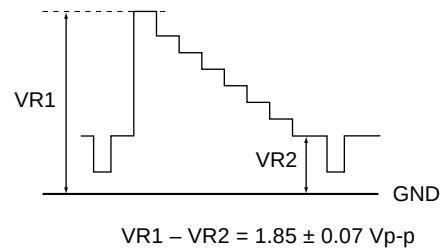
(i) SUB CONTRAST

Condition :

Category	Item	Data
SAJ	00 PIC	3F
	02 COL	00
JGL	01 RGB	04

Adjusting Parameter :

LEFT screen : YCT 04 SCT
RIGHT screen : SYC 00 SCT



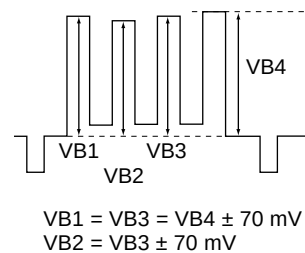
(ii) SUB HUE/SUB COL

Condition :

Category	Item	Data
SAJ	02 COL	1
	10 HUO	07
JGL	01 RGB	07

Adjusting Parameter :

LEFT screen : YCT 03 SCL
RIGHT screen : SYC 03 SCL



6-3-5. PAL RF Input

1. Enter the PAL RF color bar (White & color 75%) signal.
2. Adjust with the same manner as 6-3-2. NTSC Video Input.

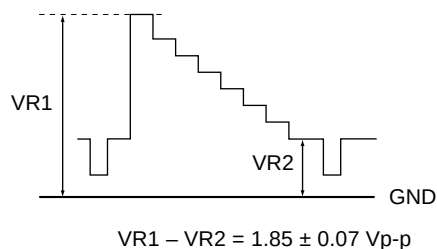
(i) SUB CONTRAST

Condition :

Category	Item		Data
SAJ	00	PIC	3F
	02	COL	00
JGL	01	RGB	04

Adjusting Parameter :

LEFT screen : YCT 04 SCT
RIGHT screen : SYC 04 SCT



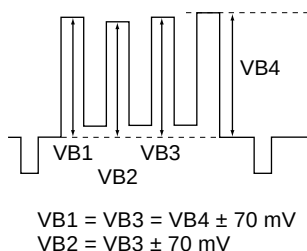
(ii) SUB HUE/SUB COL

Condition :

Category	Item		Data
SAJ	02	COL	1F
JGL	01	RGB	07

Adjusting Parameter :

LEFT screen : YCT 03 SCL
RIGHT screen : SYC 03 SCL



6-4. Color Offset (53, 61 inch model only)

6-4-1. 50 Hz (PAL) TV Mode

- 1) Enter the PAL RF signal.
- 2) Enter the service mode, and write the following data to the NVM.

Category	Item	Data	
		53 inch	61 inch
SAJ	0E CLO	0A	0B

6-4-2. 50 Hz (PAL) Video Mode

- 1) Enter the PAL video signal.
- 2) Enter the service mode, and write the following data to the NVM.

Category	Item	Data	
		53 inch	61 inch
SAJ	0E CLO	09	0A

6-4-3. 60 Hz (NTSC) TV Mode

- 1) Enter the NTSC RF signal.
- 2) Enter the service mode, and write the following data to the NVM.

Category	Item	Data	
		53 inch	61 inch
SAJ	0E CLO	0A	0B

6-4-4. 60 Hz (NTSC) Video Mode

- 1) Enter the NTSC video signal.
- 2) Enter the service mode, and write the following data to the NVM.

Category	Item	Data	
		53 inch	61 inch
SAJ	0E CLO	0A	0B

6-5. REGISTRATION ADJUSTMENT

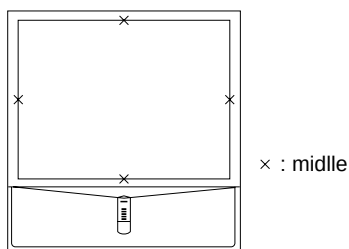
It is adjusted by REGISTRATION ADJUSTMENT respectively in the following 5 modes.

- DRC1250 (50 Hz) mode
- DRC100 (50 Hz) mode
- DRC1250 (60 Hz) mode
- DRC100 (60 Hz) mode
- DRC1250 (60 Hz) WIDE mode

6-5-1. Setup for Adjustment

1. Marking

- At the 4 insides of the screen, locate the middle. Use a tape measure to identify the middle.



2. Data Setting

- Set in the DRC1250 (50 Hz) mode.
- Set in the Service mode, and select the category "PJE".
- Press "7" + "0" button on the commander to read the data from NVM. Then all the default data are restored.
- Change it to other 4 modes, and set the data with the respectively same process.

Note : When you replaced printed circuit boards or devices or CRTs, and when correction is drastically necessary, press "5" + "0" (PJE INITIAL) button to initialize the data in the PJE mode.

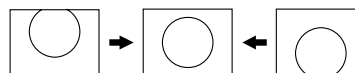
Press "MUTE" + "0" buttons on the commander to write the data.

: Be sure to set up the data in the PJE mode. All data initialize it when this operation is done by other categories.

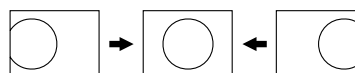
6-5-2. Method of Main Deflection Adjustment

- Place the caps on the red and blue lenses so that only the green color is displayed.
- Enter the signal.
- Set in the Service mode, and select the category "GEO".
- Adjust "01 VPS" and "05 HPS" so that the picture is displayed in the center of screen.

01 VPS

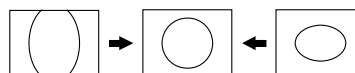


05 HPS

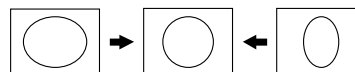


- Adjust "00 VSZ" and "04 HSZ" so that the picture size is within the specification.

00 VSZ



04 HSZ



- Adjust the following items so as to attain the optimum picture.

02 VLN



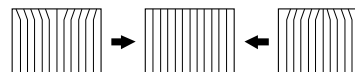
03 SCO



07 PAP



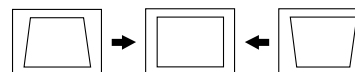
08 UPN



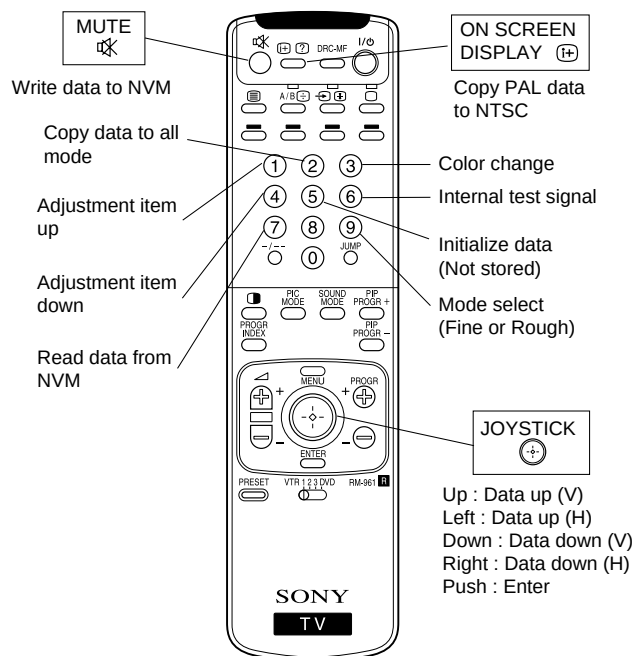
09 LPN



0A TRZ



6-5-3. Operation Method for Projector Engine (PJE) Mode



RM-961

1. Functions of Keys on Commander

- **1** : Changes adjustment item. (item No. moves up)
: Marker moves clockwise from center to outside. (in fine adjustment mode)
- **4** : Changes adjustment item. (item No. moves down)
: Marker moves counterclockwise from outside to center. (in fine adjustment mode)
- **+** : Changes data value. (up, down, or to the left or right)
(move) : Marker moves up, down, or to the left or right. (in fine adjustment mode)
- **3** : Changes adjustment color. (except item No. 00~38) GRN → BLU → RED
- **6** : Displays or changes internal test signals.
: crosshatch + external signal → dot + external signal → crosshatch only → dot only → off
- **9** : Switches adjustment mode.
rough adjustment mode → fine adjustment mode
- **+** : Switches marker moving method. (push) (in fine adjustment mode)

Commander Function (PJE mode)

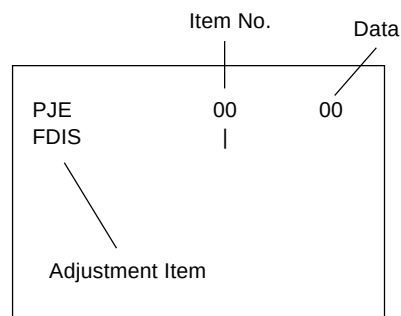
Button	Mode	Description
+ + 0	WRITE	Writes data to NVM.
7 + 0	READ	Reads data from NVM.
5 + 0	*PJE INITIAL	Service data initialization. Not stored. (Be sure not to use usually)
2 + 0	*PJE COPY	Copies and writes data of DRC1250 (50Hz) mode to all other modes.
+ + 0	*PJE WRT5060	Copies data of 50 Hz (PAL) mode to 60 Hz (NTSC) mode.

* : only data in the PJE mode.

joystick key → **1** and **4** buttons

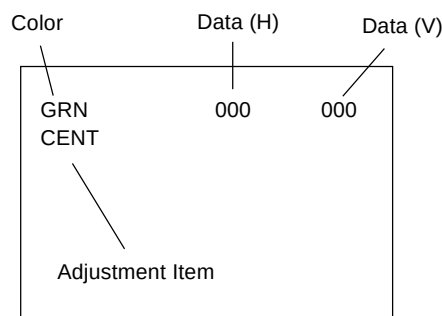
2. Operation Method for Rough Adjustment

- Set in the Service mode, and select the category “PJE”.
- Press “**1**” or “**4**” button on the commander to select the item, and move “**+**” up, down, or to the left or right to



change the data.

- Select item “GRN CENT”. When BLU or RED is displayed, press “**3**” button on the commander to change the adjustment color in the order of GRN → BLU → RED.
- In the GRN, BLU, or RED mode, move “**+**” up or down to change the data in vertical direction, or move “**+**” to the



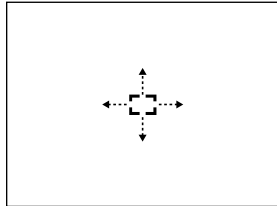
left or right to change the data in horizontal direction.

- When it moves from PJE to other categories, repeat “**1**” or “**4**” button and press it.

3. Operation Method for Fine Adjustment (in GRN, BLU, or RED Mode)

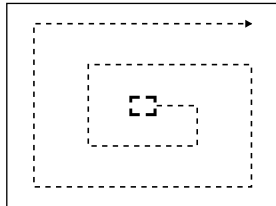
- 1) Set in the Service mode, and select the category "PJE".
- 2) Select item "FDIS" so that the data at each position can be displayed in the fine adjustment mode, and set the data to "01".
- 3) Press "⑨" button on the commander, and the fine adjustment mode will be active where a green marker appears in the center of screen (in the case of GRN mode).
- 4) Push "⊕" (ENTER) button, and the marker color will be switched between green (GRN mode) and white alternately.
- 5) Use "①" or "④" button on the commander, or the joystick to move the marker to the position to be adjusted, where fine adjustment can be made.

- When marker color is white.
(in this case, fine adjustment is disabled)



Operating the joystick can move the marker up, down, or to the left or right freely.

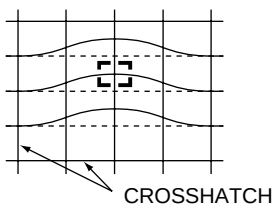
- When marker color is green. (GRN mode)



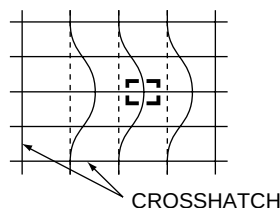
- ① : moves the marker clockwise from center to outside.
- ④ : moves the marker counterclockwise from outside to center.

- Fine adjustment can be made on the basis of marker position using joystick key.

Movement when joystick key is moved up.



Movement when joystick key is moved to the right.



- 6) Press "⑨" button on the commander to return to the rough adjustment mode.

6-5-4. Method of Projector Engine Adjustment (Sub Deflection Adjustment)

Adjustment ○ : Yes – : No

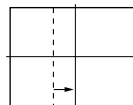
Adjustment Item	Adjustment Type		
	GRN	RED	BLU
	H / V	H / V	H / V
CENT	○ / ○	○ / ○	○ / ○
SKEW	○ / ○	○ / ○	○ / ○
SIZE	○ / ○	○ / ○	○ / ○
LIN	– / –	○ / –	○ / –
KEY	– / –	– / ○	– / ○
PIN	– / ○	– / ○	– / ○

1. Green Adjustment

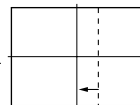
- 1) Place the caps on the red and blue lenses so that only the green color is displayed.
- 2) Enter the signal.
- 3) Set in the Service mode, and select the category "PJE".
- 4) Press "⑥" button on the commander to display internal test signal (crosshatch).
- 5) Select "GRN CENT", and adjust so that the picture coincide in the center of screen.

- GRN CENT (horizontally/vertically)

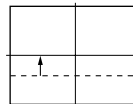
Move the joystick to the right.



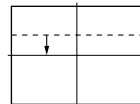
Move the joystick to the left.



Move the joystick up.

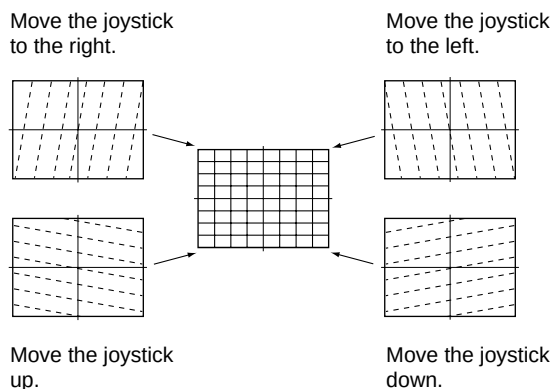


Move the joystick down.



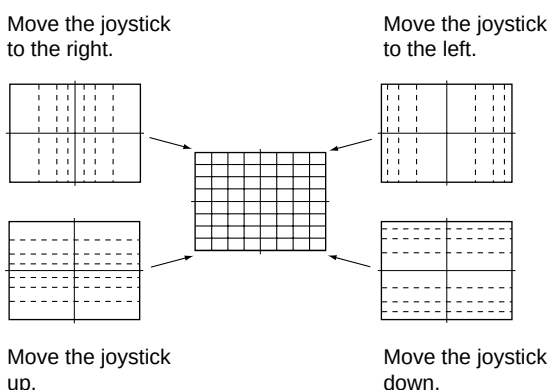
- 6) Select “GRN SKEW”, and correct the tilt of horizontal lines and vertical lines.

• GRN SKEW (horizontally/vertically)



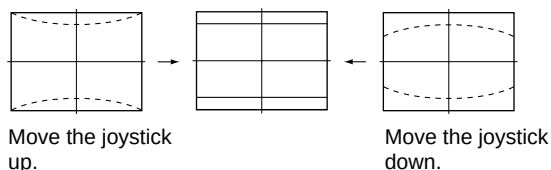
- 7) Select “GRN SIZE”, and adjust so that each distance from center to left end and to right end is equal. Adjust so that each distance from center to top and to bottom is equal.

• GRN SIZE (horizontally/vertically)



- 8) Select “GRN PIN”, and adjust so that upper and lower horizontal lines on the screen become straight.

• GRN PIN (vertically)



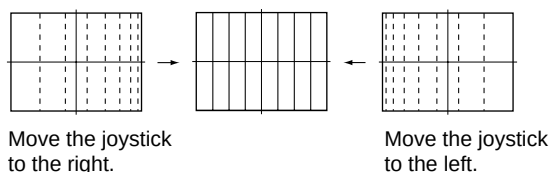
- 9) Press “⑨” button on the commander to enter the fine adjustment mode.
10) Make fine adjustment so that horizontal lines and vertical lines become straight.
11) Press “⑨” button on the commander to return to the rough adjustment mode.

2. Blue Adjustment

- 1) Place a cap on the red lens so that green and blue colors are displayed.
- 2) Press “③” button on the commander to select BLU mode.
- 3) Adjust the following items so that blue lines overlap with green lines.

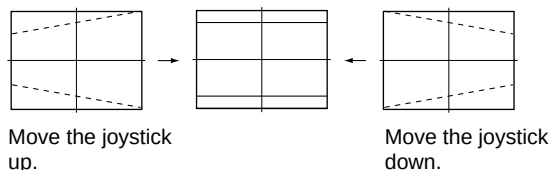
- BLU CENT (horizontally/vertically)
- BLU SKEW (horizontally/vertically)
- BLU SIZE (horizontally/vertically)
- BLU LIN (horizontally)

Adjust so that each space at the right end and at the left end of screen is equal.



• BLU KEY (vertically)

Adjust so that upper and lower horizontal lines on the screen become parallel.



• BLU PIN (vertically)

- 4) Press “⑨” button on the commander to enter the fine adjustment mode.
- 5) Make fine adjustment so that horizontal lines and vertical lines overlap with green lines.
- 6) Press “⑨” button on the commander to return to the rough adjustment mode.

3. Red Adjustment

- 1) Place a cap on the blue lens so that green and red colors are displayed.
- 2) Press “③” button on the commander to select RED mode.
- 3) Hereinafter, use same manner as that of blue adjustment to adjust so that the red lines overlap with green lines.

6-5-5. Deflection Adjustment

1. DRC1250 50 Hz (PAL) Mode

- 1) Enter the PAL SPCB signal, and set the DRC1250.
- 2) Set in the service mode, and write the following data to NVM.

Condition :

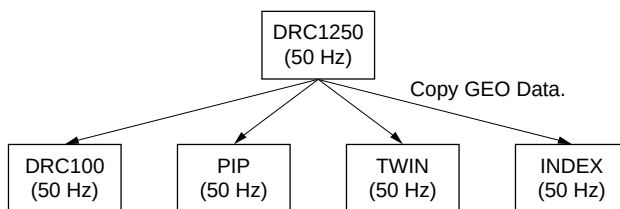
Category	Item	Data
GEO	0B AGL	07
	0C BOW	07
	15 VSC	1F
MID	00 HPH	3E
	01 VPH	15

- 3) Adjust the main deflection. (Refer to 6-5-2.)

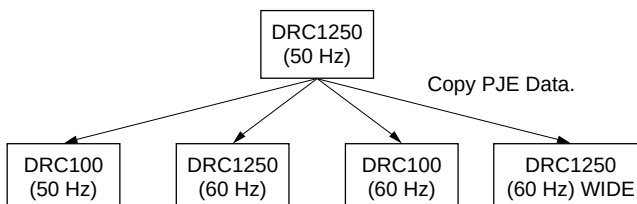
SPEC Overscan Spec. = 7.5%

Input Signal	H SIZE	V SIZE
PAL SPCB	16.6 ± 0.1 sq.	12.5 ± 0.1 sq.

- 4) After the Main Deflection Adjustment finished, press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.
- 5) Select the category “GEO” and the item “19 CPY”, and set the data to “01”.
Press “ (MUTE)”+“” buttons to copy GEO data to other 50 Hz modes



- 6) Adjust the sub deflection (Projector Engine Adjustment). (Refer to 6-5-3.)
- 7) After the Projector Engine Adjustment finished, press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.
- 8) Press “”+“” buttons to copy PJE data to all other modes in the PJE mode.



2. DRC100 50 Hz (PAL) Mode

- 1) Enter the PAL SPCB signal, and set the DRC100.
- 2) Set in the service mode, and write the following data to NVM.

Condition :

Category	Item	Data
GEO	0B AGL	07
	0C BOW	07
	15 VSC	1F
MID	00 HPH	3E
	01 VPH	0C

- 3) Adjust the main deflection. (Refer to 6-5-2.)

SPEC Overscan Spec. = 7.5%

Input Signal	H SIZE	V SIZE
PAL SPCB	16.6 ± 0.1 sq.	12.5 ± 0.1 sq.

- 4) After the Main Deflection Adjustment finished, press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.
- 5) Adjust the sub deflection (Projector Engine Adjustment). (Refer to 6-5-3.)
- 6) After the Projector Engine Adjustment finished, press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.

3. PIP 50 Hz (PAL) Mode

- 1) Enter the PAL SPCB signal, and set in the service mode.
- 2) Open the remote control cover, press “ (PIP)” button on the commander to set the PIP mode.
- 3) Confirm and set the following data.

Condition :

Category	Item	Data
GEO	00 VSZ	Same as DRC1250 50 Hz (PAL) mode
	01 VPS	
	02 VLN	
	03 SCO	
	04 HSZ	
	05 HPS	
	07 PAP	
	08 UPN	
	09 LPN	
	0A TRZ	
MID	0B AGL	07
	0C BOW	07
	15 VSC	1F
	00 HPH	3E
	01 VPH	15

- 4) Press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.

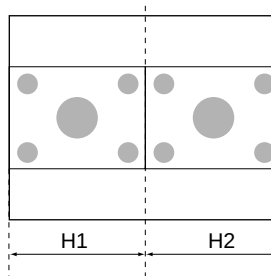
4. TWIN 50 Hz (PAL) Mode

- 1) Enter the PAL SPCB signal, and set in the service mode.
- 2) Press “ (TWIN)” button on the commander to set the TWIN mode.
- 3) Confirm and set the following data.

Condition :

Category	Item	Data
GEO	00 VSZ	Same as DRC1250 50 Hz (PAL) mode
	01 VPS	
	02 VLN	
	03 SCO	
	04 HSZ	
	05 HPS	
	07 PAP	
	08 UPN	
	09 LPN	
	0A TRZ	
MID	0B AGL	07
	0C BOW	07
	15 VSC	1F
	00 HPH	7B
	01 VPH	20
	11 TMP	01
	12 TSP	00

- 4) Select the category “GEO” and the item “05 HPS”, and adjust the horizontal position.



$$H1 - H2 = \pm 0.1 \text{ sq.}$$

- 5) Press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.

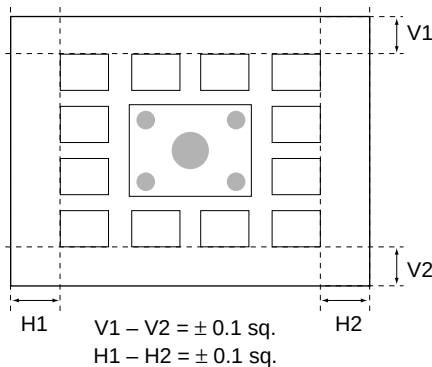
5. INDEX 50 Hz (PAL) Mode

- 1) Enter the PAL SPCB signal, and set in the service mode.
- 2) Press “PROGR INDEX” button on the commander to set the INDEX mode.
- 3) Confirm and set the following data.

Condition :

Category	Item	Data
GEO	00 VSZ	Same as DRC1250 50 Hz (PAL) mode
	01 VPS	
	02 VLN	
	03 SCO	
	04 HSZ	
	05 HPS	
	07 PAP	
	08 UPN	
	09 LPN	
	0A TRZ	
	0B AGL	07
	0C BOW	07
	15 VSC	1F
MID	00 HPH	78
	01 VPH	1A

- 4) Select the category “GEO” and the item “05 HPS” to adjust the horizontal position, and select the item “01 VPS” to adjust the vertical position.



- 5) Press “MUTE”+“0” buttons on the commander to write the data to the NVM.

6. DRC1250 60 Hz (NTSC) Mode

- 1) Enter the NTSC monoscope signal, and set the DRC1250.
- 2) Set in the service mode, and write the following data to NVM.

Condition :

Category	Item	Data
GEO	0B AGL	07
	0C BOW	07
	15 VSC	22
MID	00 HPH	49
	01 VPH	25

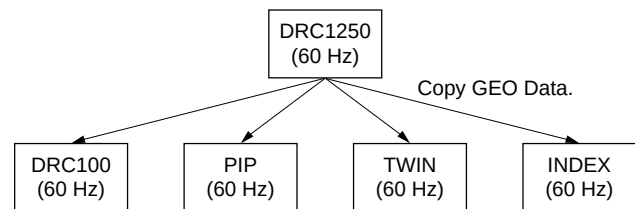
- 3) Adjust the main deflection. (Refer to 6-5-2.)

SPEC

Overscan Spec. = 7.5%

Input Signal	H SIZE	V SIZE
NTSC monoscope	$15.7 \pm 0.1 \text{ sq.}$	$11.8 \pm 0.1 \text{ sq.}$

- 4) After the Main Deflection Adjustment finished, press “MUTE”+“0” buttons on the commander to write the data to the NVM.
- 5) Select the category “GEO” and the item “19 CPY”, and set the data to “01”.
Press “MUTE”+“0” buttons to copy GEO data to other 60 Hz modes



- 6) Adjust the sub deflection (Projector Engine Adjustment). (Refer to 6-5-3.)
- 7) After the Projector Engine Adjustment finished, press “MUTE”+“0” buttons on the commander to write the data to the NVM.

7. DRC100 60 Hz (NTSC) Mode

- 1) Enter the NTSC monoscope signal, and set the DRC100.
- 2) Set in the service mode, and write the following data to NVM.

Condition :

Category	Item		Data
GEO	0B	AGL	07
	0C	BOW	07
	15	VSC	22
MID	00	HPH	49
	01	VPH	13

- 3) Adjust the main deflection. (Refer to 6-5-2.)

SPEC Overscan Spec. = 7.5%

Input Signal	H SIZE	V SIZE
NTSC monoscope	15.7 ± 0.1 sq.	11.8 ± 0.1 sq.

- 4) After the Main Deflection Adjustment finished, press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.
- 5) Adjust the sub deflection (Projector Engine Adjustment). (Refer to 6-5-3.)
- 6) After the Projector Engine Adjustment finished, press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.

8. PIP 60 Hz (NTSC) Mode

- 1) Enter the NTSC monoscope signal, and set in the service mode.
- 2) Open the remote control cover, press “ (PIP)” button on the commander to set the PIP mode.
- 3) Confirm and set the following data.

Condition :

Category	Item		Data
GEO	00	VSZ	Same as DRC1250 60 Hz (NTSC) mode
	01	VPS	
	02	VLN	
	03	SCO	
	04	HSZ	
	05	HPS	
	07	PAP	
	08	UPN	
	09	LPN	
	0A	TRZ	
	0B	AGL	
MID	0C	BOW	07
	15	VSC	22
	00	HPH	49
	01	VPH	25

- 4) Press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.

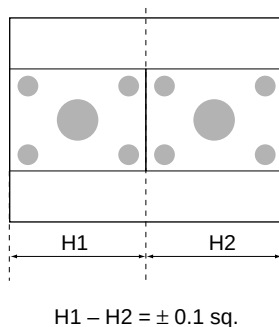
9. TWIN 60 Hz (NTSC) Mode

- 1) Enter the NTSC monoscope signal, and set in the service mode.
- 2) Press “ (TWIN)” button on the commander to set the TWIN mode.
- 3) Confirm and set the following data.

Condition :

Category	Item	Data
GEO	00 VSZ	Same as DRC1250 60 Hz (NTSC) mode
	01 VPS	
	02 VLN	
	03 SCO	
	04 HSZ	
	05 HPS	
	07 PAP	
	08 UPN	
	09 LPN	
	0A TRZ	
	0B AGL	07
	0C BOW	07
	15 VSC	22
MID	00 HPH	6F
	01 VPH	2E
	11 TMP	01
	12 TSP	00

- 4) Select the category “GEO” and the item “05 HPS”, and adjust the horizontal position.



- 5) Press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.

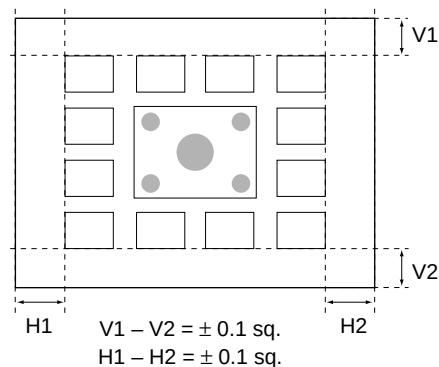
10. INDEX 60 Hz (NTSC) Mode

- 1) Enter the NTSC monoscope signal, and set in the service mode.
- 2) Press “PROGR INDEX” button on the commander to set the INDEX mode.
- 3) Confirm and set the following data.

Condition :

Category	Item	Data
GEO	00 VSZ	Same as DRC1250 60 Hz (NTSC) mode
	01 VPS	
	02 VLN	
	03 SCO	
	04 HSZ	
	05 HPS	
	07 PAP	
	08 UPN	
	09 LPN	
	0A TRZ	
	0B AGL	07
	0C BOW	07
	15 VSC	22
MID	00 HPH	6C
	01 VPH	2D

- 4) Select the category “GEO” and the item “05 HPS” to adjust the horizontal position, and select the item “01 VPS” to adjust the vertical position.



- 5) Press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.

11.DRC1250 WIDE 60 Hz (NTSC) Mode

- 1) Enter the NTSC monoscope signal and set the DRC1250.
- 2) Press “MENU” button on the commander and move “” up or down to enter the “FEATURE” → “WIDE MODE”.
- 3) Select “WIDE MODE : ON”, and push “ (ENTER)” button.
- 4) Press “MENU” button to return to service mode screen.
- 5) Set in the service mode and write the following data to NVM.

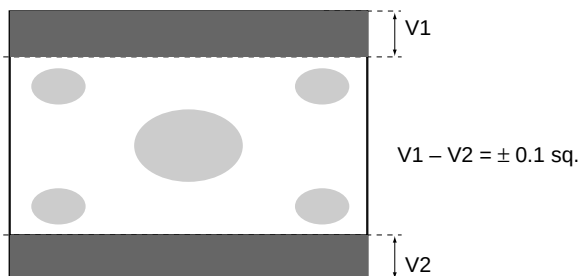
Condition :

Category	Item	Data
GEO	0B AGL	07
	0C BOW	07
	14 VAS	2C
	15 VSC	22
	16 USC	01
	17 VBW	03

- 3) Adjust the main deflection. (Refer to 6-5-2.)

SPEC

Input Signal	H SIZE
NTSC monoscope	15.7 ± 0.1 sq.



- 4) After the Main Deflection Adjustment finished, press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.
- 5) Adjust the sub deflection (Projector Engine Adjustment). (Refer to 6-5-3.)
- 6) After the Projector Engine Adjustment finished, press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.

12.PIP WIDE 60 Hz (NTSC) Mode

- 1) Enter the NTSC monoscope signal and set in the service mode.
- 2) Set the WIDE mode and open the remote control cover, press “ (PIP)” button on the commander to set the PIP mode.
- 3) Confirm and write the following data.

Condition :

Category	Item	Data
GEO	00 VSZ	Same as DRC1250 WIDE 60 Hz (NTSC) mode
	01 VPS	
	02 VLN	
	03 SCO	
	04 HSZ	
	05 HPS	
	07 PAP	
	08 UPN	
	09 LPN	
	0A TRZ	
	0B AGL	07
	0C BOW	07
	14 VAS	2C
	15 VSC	22
	17 VBW	03

- 4) Press “ (MUTE)”+“” buttons on the commander to write the data to the NVM.

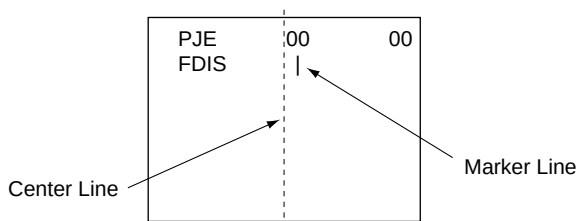
Note : In case of replacing CRTs, adjust the set-up adjustments (items 4-1 to 4-7) and the registration adjustment (item 6-5).

In case of replacing two or three CRTs at the same time, replace and adjust one by one.

6-6. AUTO CONVERGENCE SETTING

This adjustment must be performed after the registration adjustment was made or after readjustment was made by any reason.

1. Darken the periphery of this set.
2. Enter the PAL SPCB signal, and set the DRC100 mode.
3. Set in the service mode, and select the category "PJE" and the item "PWM2".
4. Adjust "PWM2" so that the marker line is on monoscope center line.



5. Press "⏏ (MUTE)" + "⓪" buttons on the commander to write the data to the NVM.
6. Press "⏏ (AUTO CONVERGENCE)" button on the front panel of the set.
(The offset value is now automatically stored.)
7. Check that no error message appears.
If an error message appears, recheck. (Refer to 6-8.)
8. In the same manner, select DRC100 mode respectively, and press the "⏏ (AUTO CONVERGENCE)" button.
9. Enter the NTSC monoscope signal, and perform the same steps in the DRC1250, DRC100 and DRC1250 WIDE modes respectively.

6-7. WHITE BALANCE ADJUSTMENT

1. Enter the monoscope signal.
2. Set in the service mode.
3. Press "MENU" button on the commander to select "A/V CONTROL" → "PICTURE MODE" → "ADJUST".

Adjustment Condition

PICTURE MODE : PERSONAL
PICTURE : 0%
BRIGHT : 50%

If the noise of DCF (Digital Comb Filter) has an effecting white balance adjustment, change service data as follows while the adjustment.

OPM 06 COM : 00 → 01

(This time, beginning inspection also should be done under some condition.)

Adjusting Parameter

Category	Item
WHB	02 SBR
	03 RDR
	05 BDR
	06 RCT
	08 BCT

4. Adjust "02 SBR" so that 10 IRE section barely grows.
3. Enter the all-white pattern signal.
6. Adjust "06 RCT" and "08 BCT" so as to attain the optimum white balance.
7. Adjust "02 SBR" so that 100 IRE section barely grows.
8. Adjust "03 RDR" and "05 BDR" so as to attain the optimum white balance.
9. Repeatedly adjust the white balance for the minimum and maximum picture setting.
10. Enter the monoscope signal, and select "SAJ 00 PIC", and set the data to "00".
11. Adjust "02 SBR" so that the border between 0 IRE and 10 IRE becomes distinct.

6-8. AUTO CONVERGENCE ERROR CODE LIST

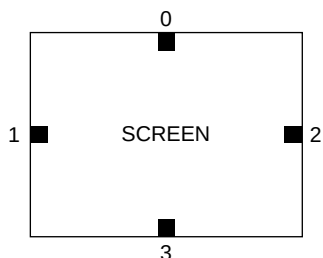
If an error code is displayed after the set has been fully adjusted, correctly, please check the following items : position, tilt and sizing. If either of these adjustments are off, even slightly, the auto registration pattern will not hit the four sensors properly. This occurs when the internal generator patterns is being flashed on the screen for the sensor to read. Therefore, auto registration (called auto convergence) cannot operate properly causing an error code to be displayed. In order for this function to operate properly, correct position, tilt and size must be adjusted properly.

ERROR CODE LIST

ERROR CODE	DESCRIPTION	NOTE
00	No Error	
10	Sensor Input Level Low	* Check wiring, beam position, sensor. 0 : Upper Center 1 : Middle Left 2 : Middle Right 3 : Lower Center
20	Sensor Input Level High	* Check OP-Amp circuit. 0 : Upper Center 1 : Middle Left 2 : Middle Right 3 : Lower Center
30	Loop Limit Over	* Check the registration information on the convergence board.
40	Regi Data Overflow	* Check the convergence yoke driver ICs.
50	Regi Data Overdraw	
60	Offset Data Overflow	* Convergence patterns displayed are out of normal range.
70	Offset Data Overdraw	

* : In case of multiple error, last error is displayed.

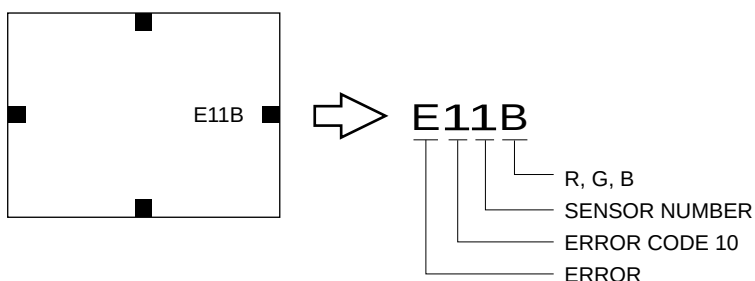
[SENSOR POSITION]



0 : UPPER SENSOR
1 : LEFT SENSOR
2 : RIGHT SENSOR
3 : LOWER SENSOR

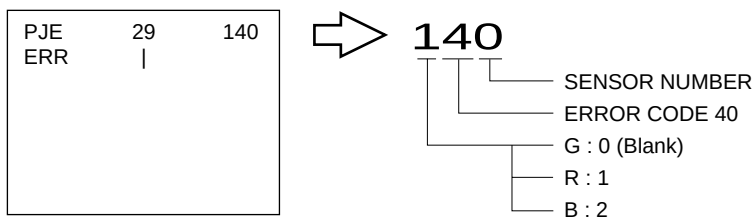
• ERROR CODE SCREEN DISPLAY

(When press “ (AUTO CONVERGENCE)” button.)



• ERROR CODE SCREEN DISPLAY

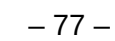
(When select “PJE” → “29 ERR”.)

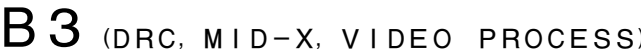


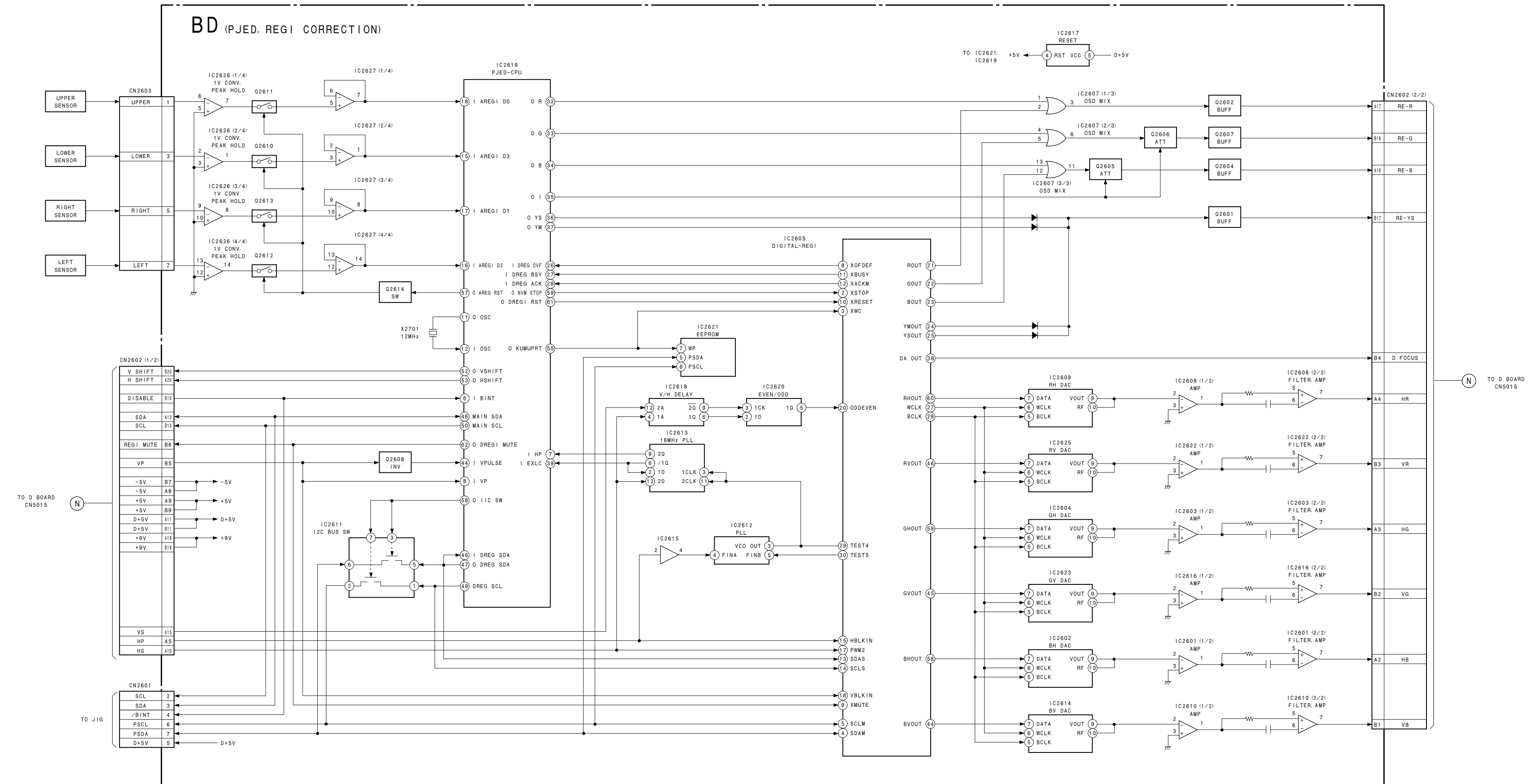
Category : PJE
Item : 29 ERR

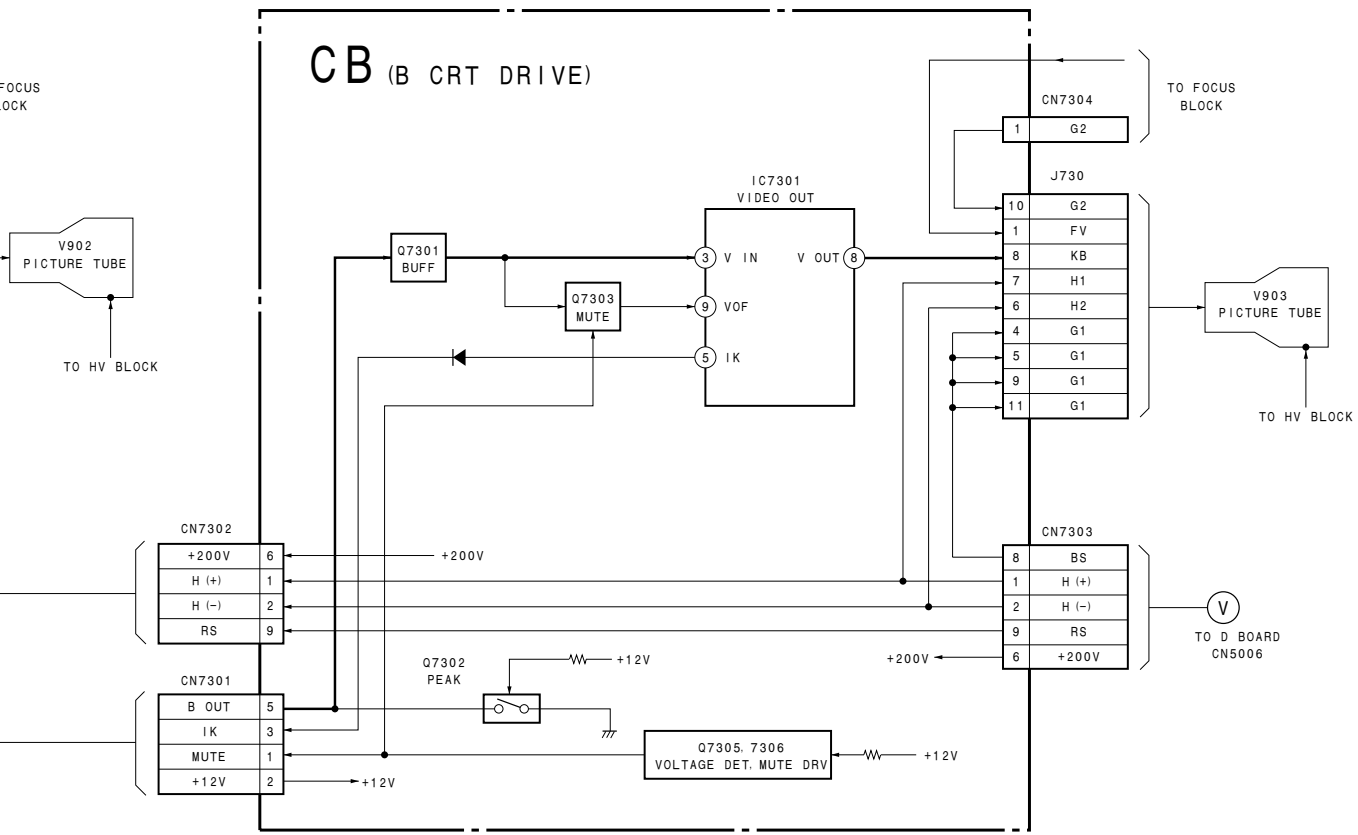
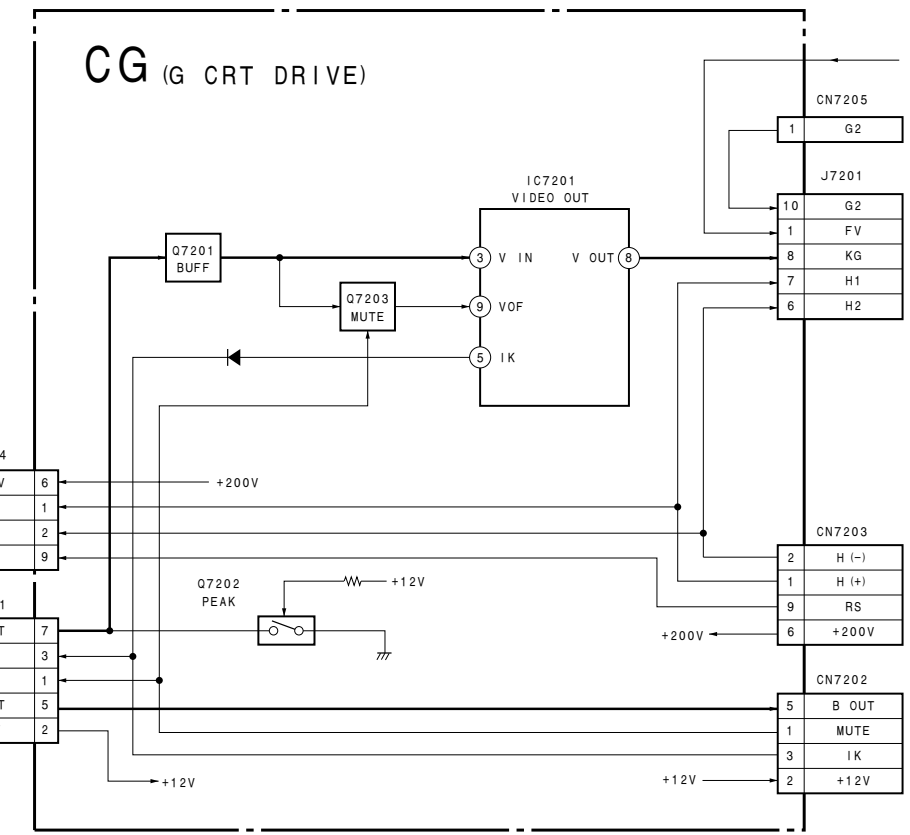
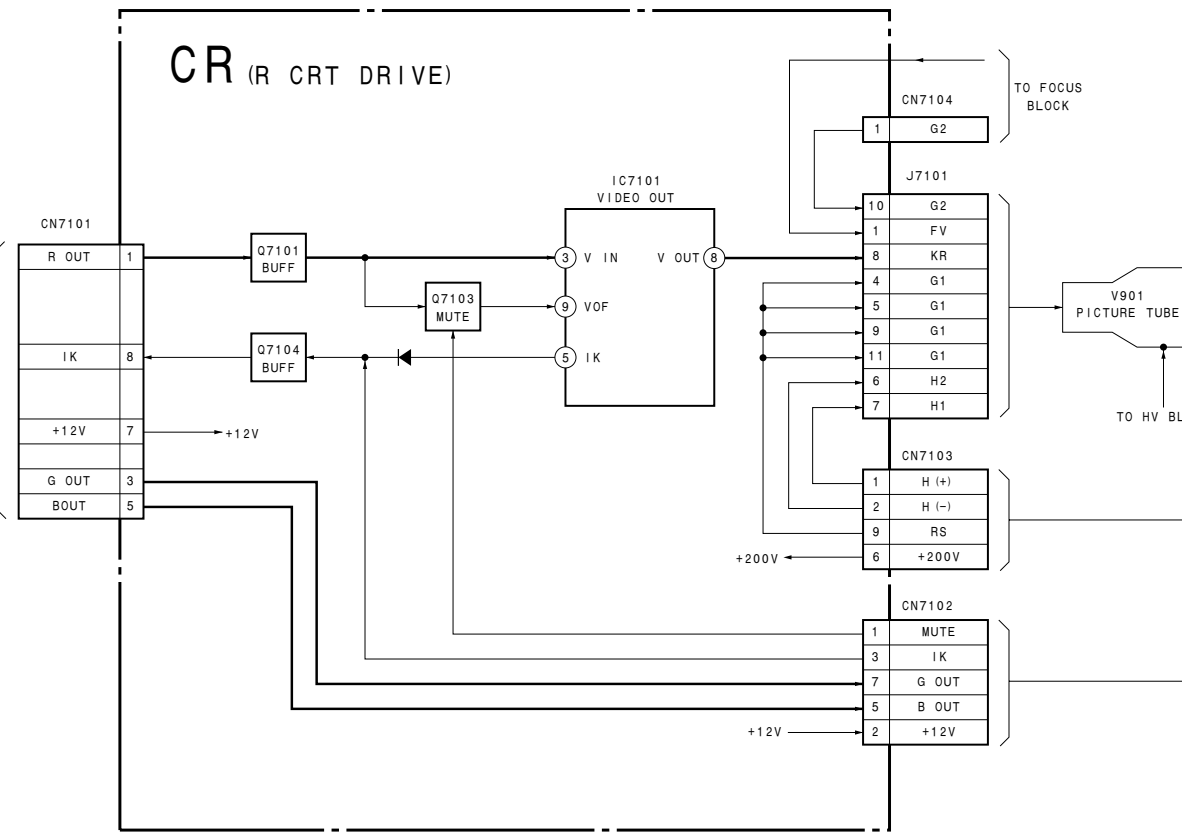
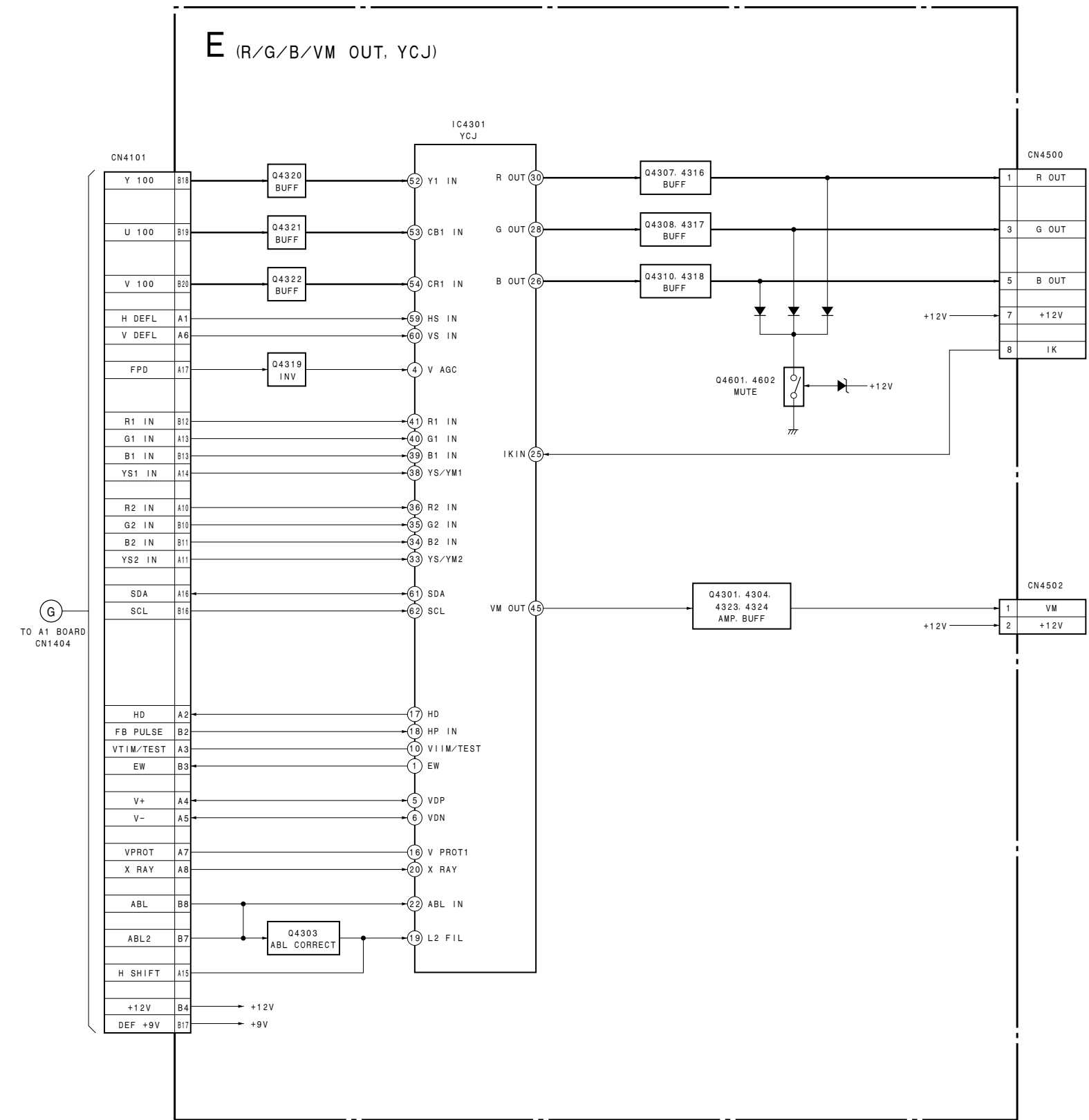
SECTION 7

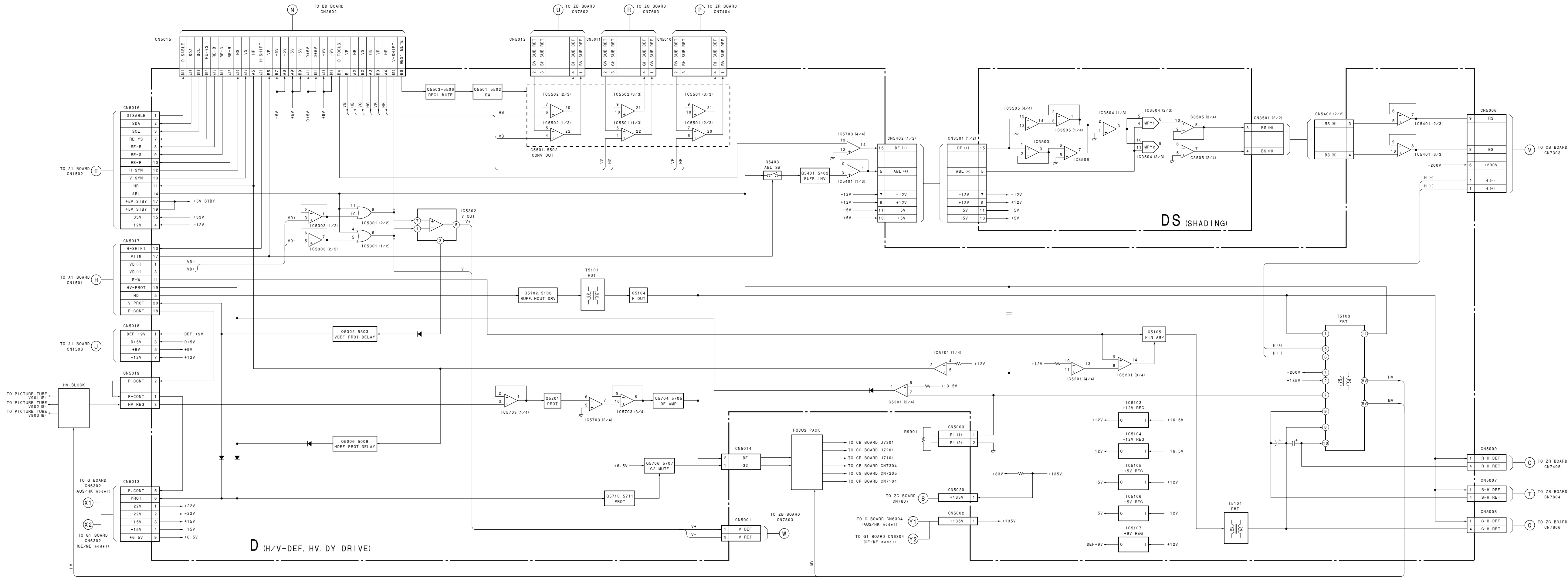
DIAGRAMS

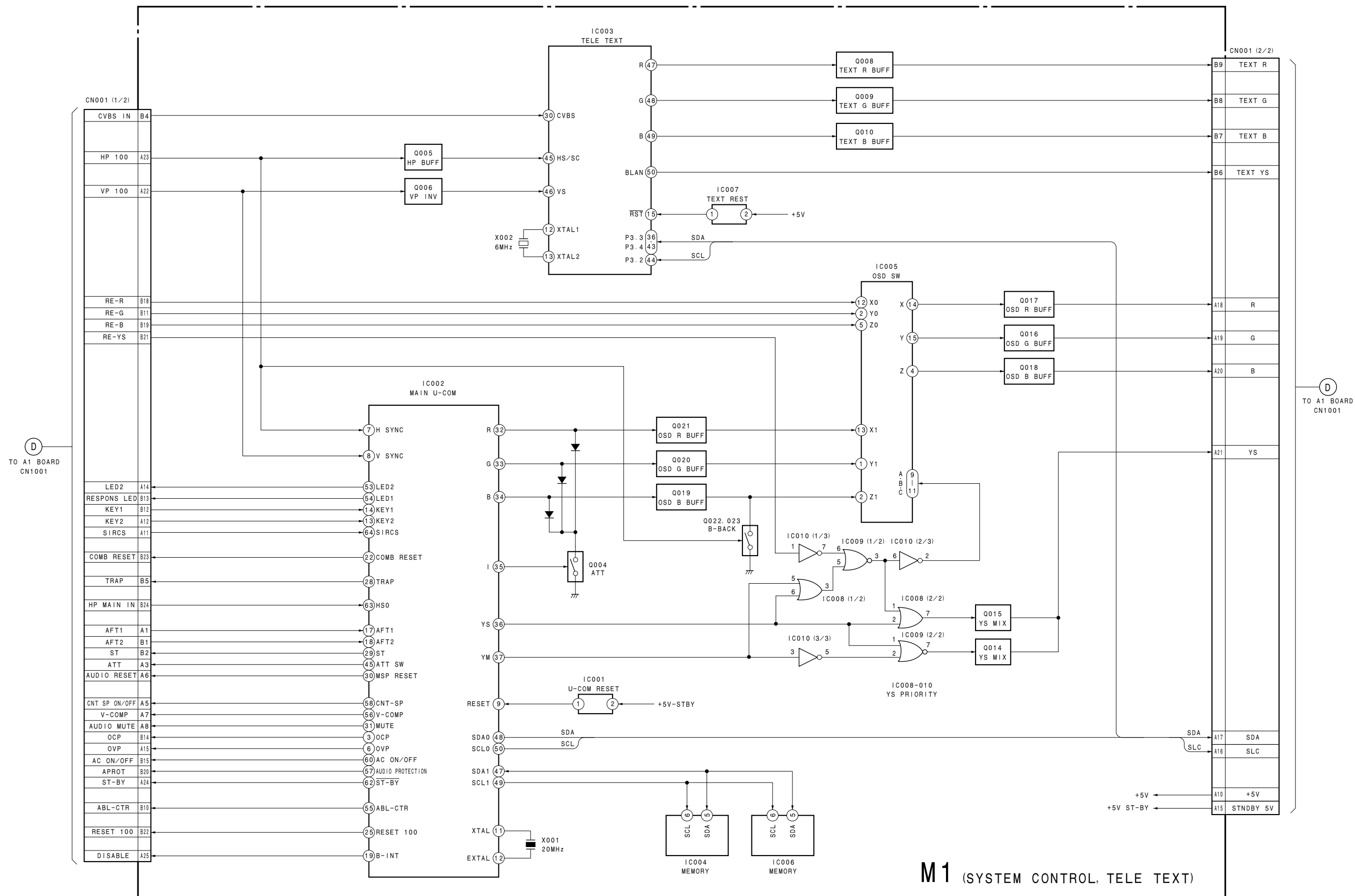


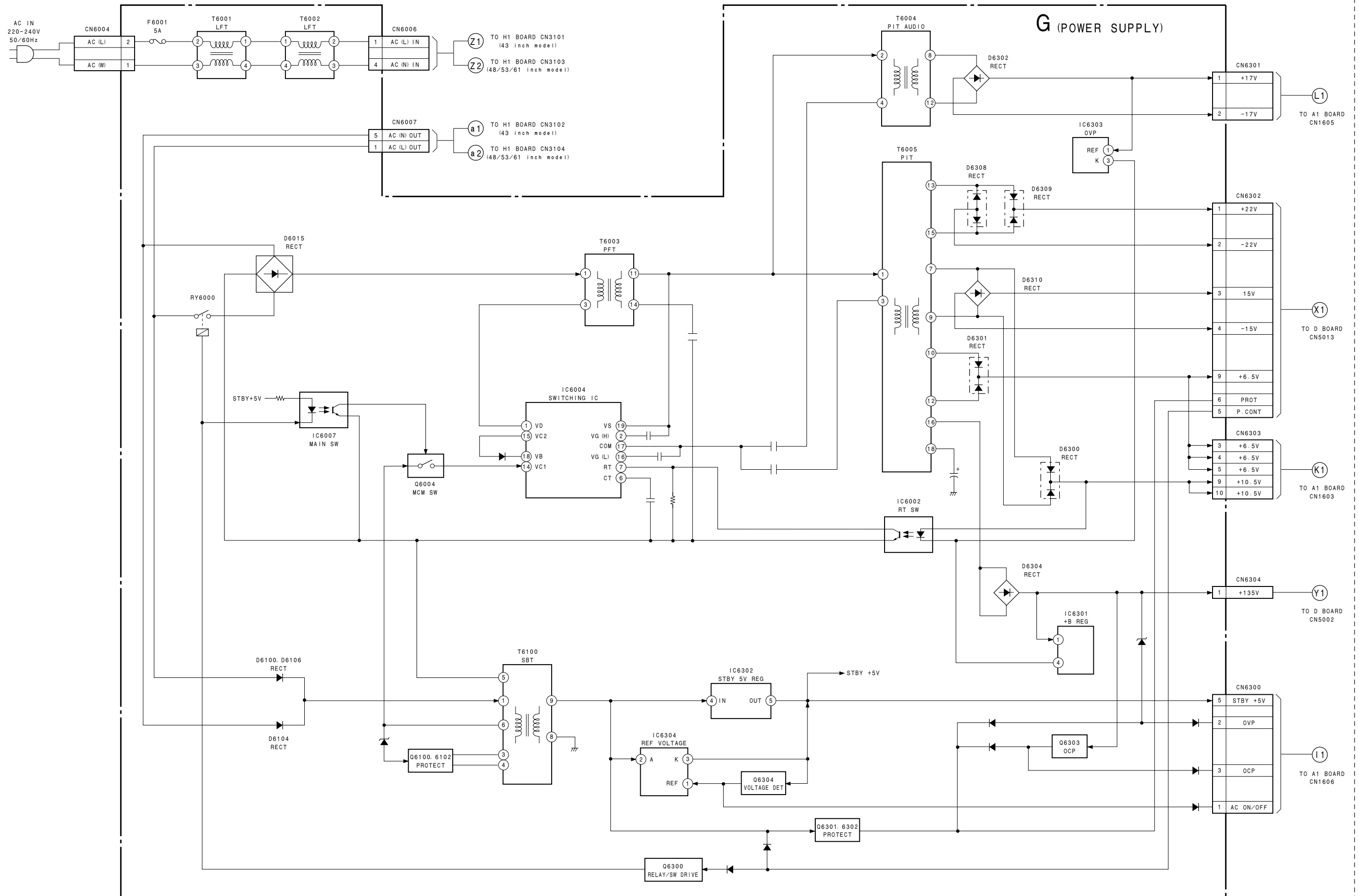


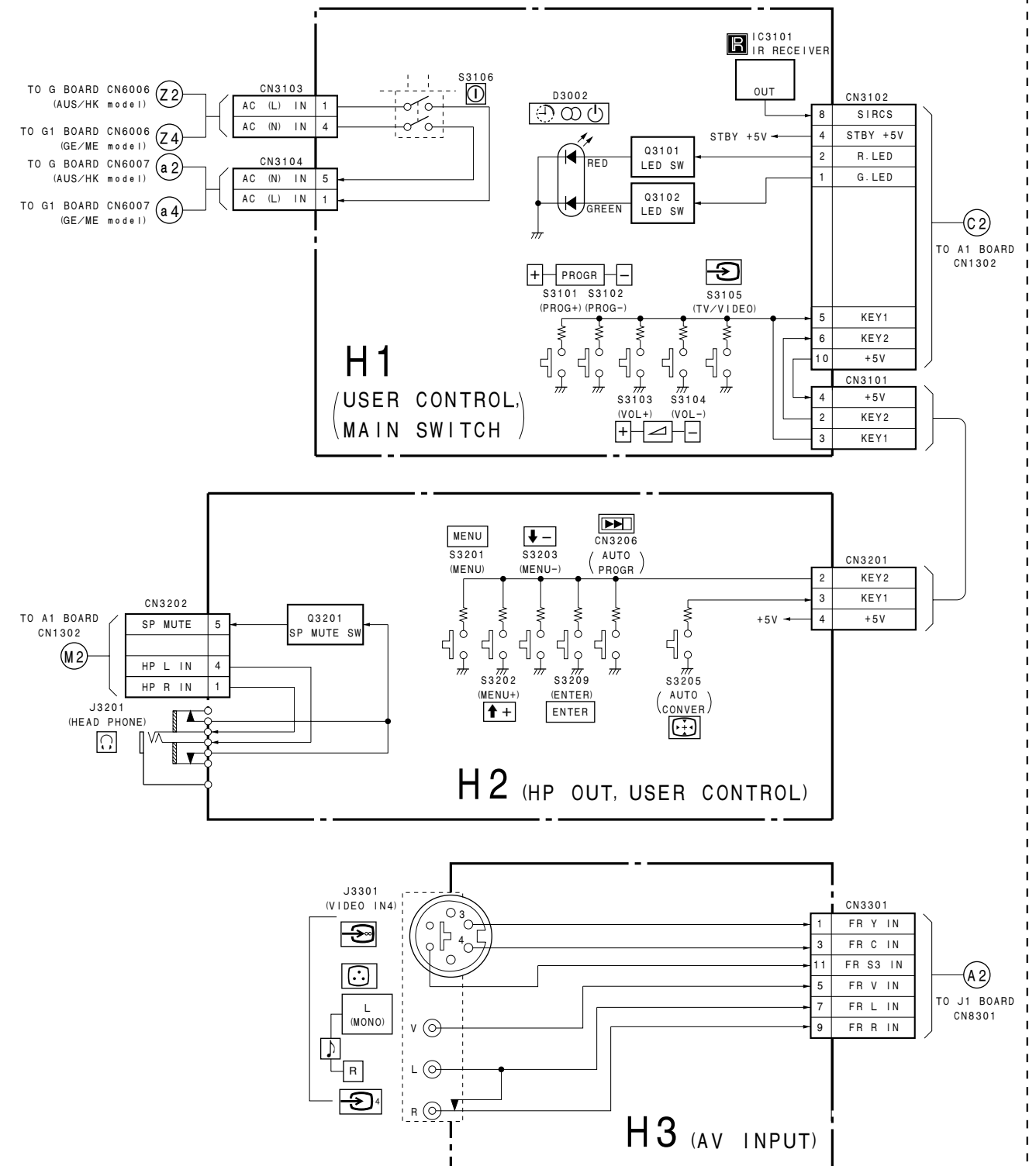
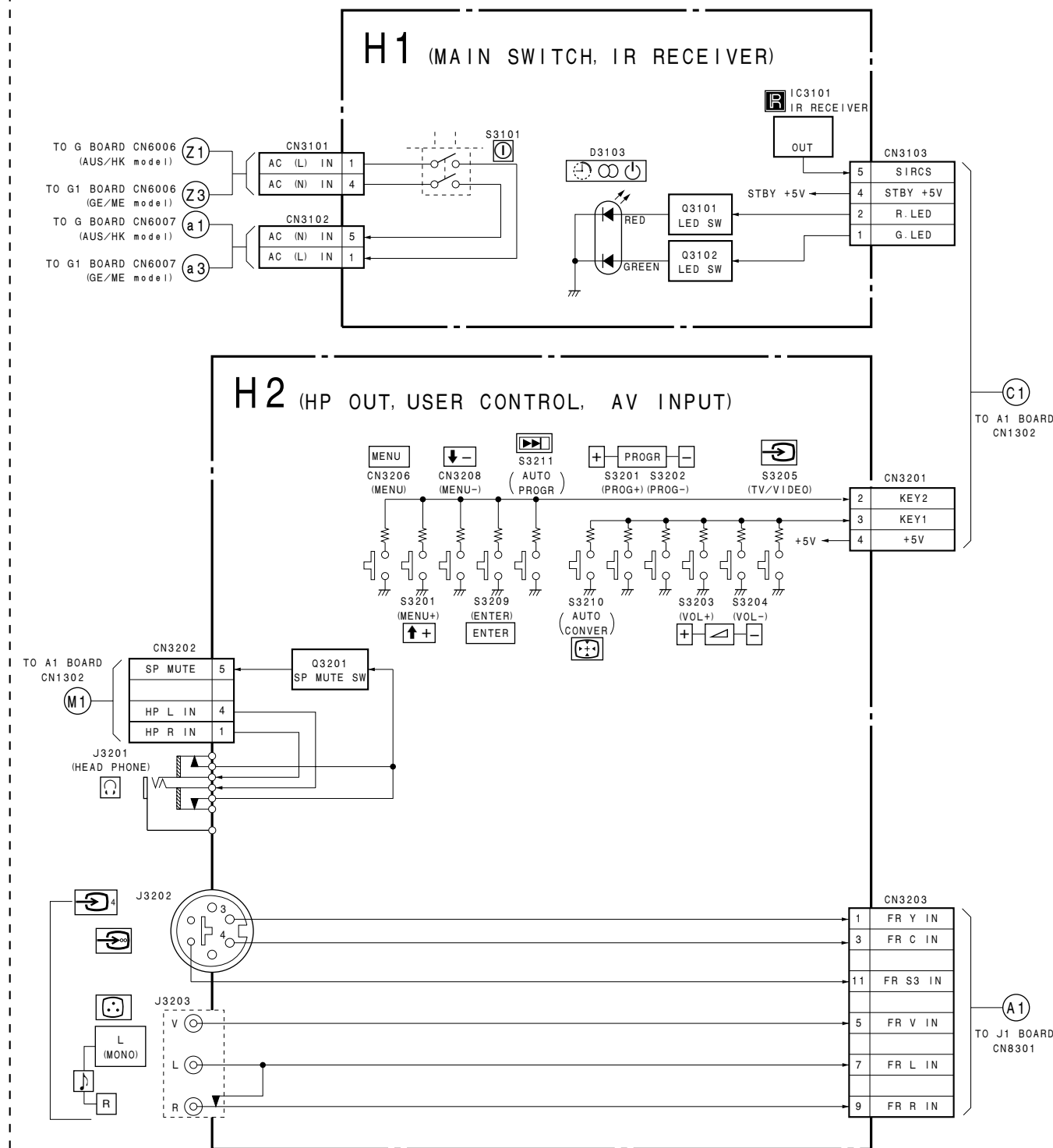




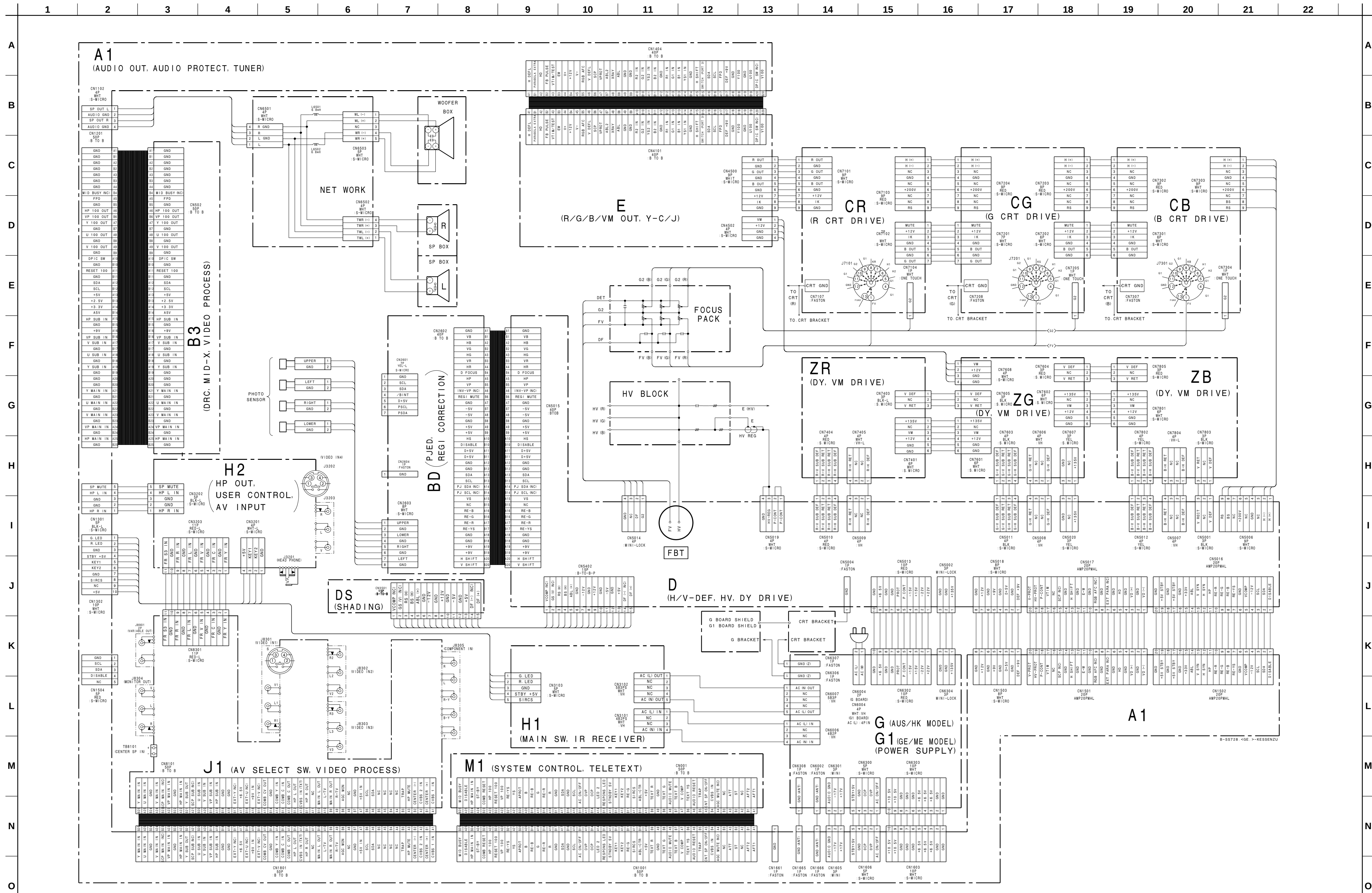




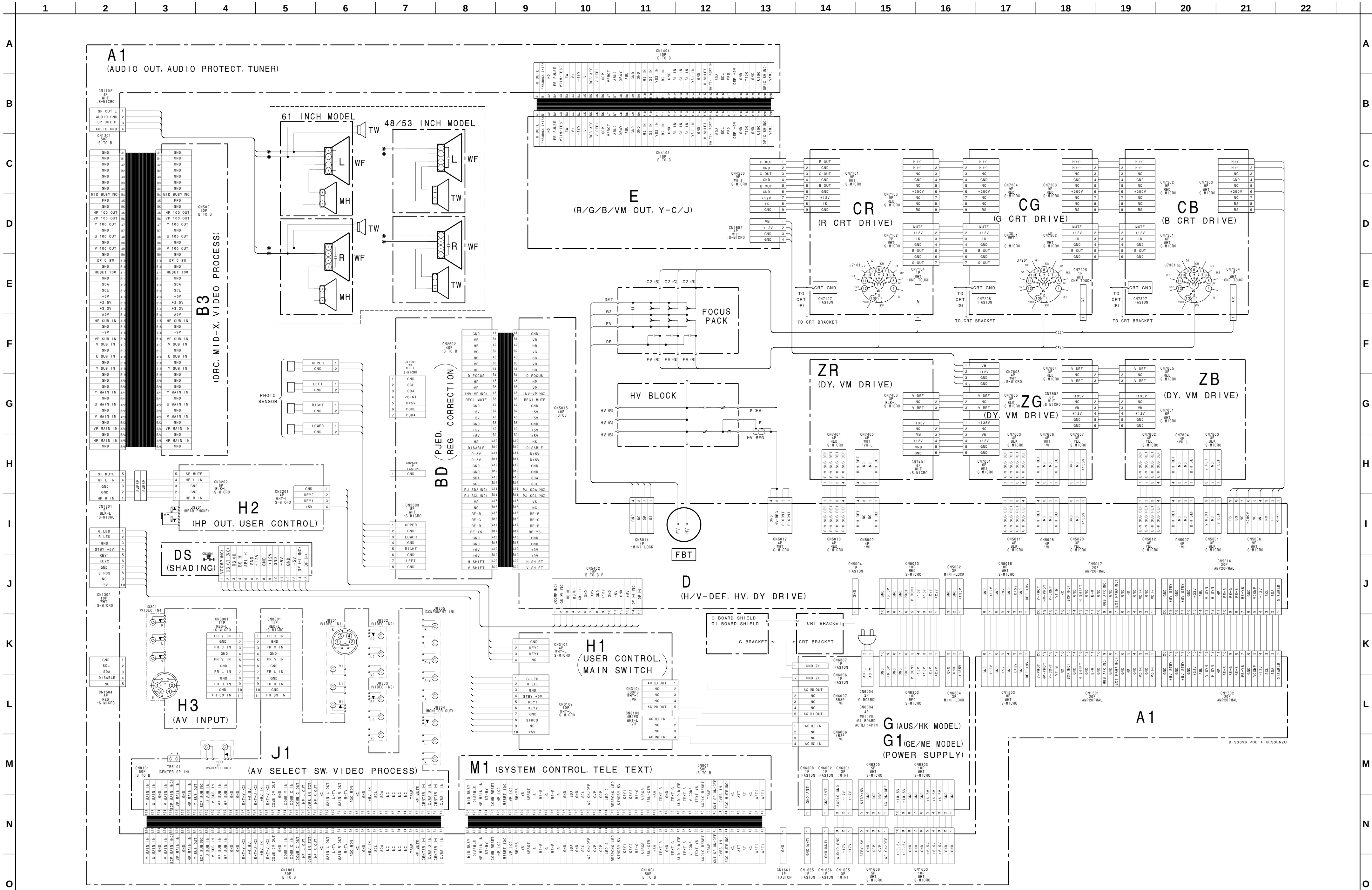




7-2. FRAME SCHEMATIC DIAGRAM (1) (KP-ES43)



FRAME SCHEMATIC DIAGRAM (2) (KP-ES48/53/61)



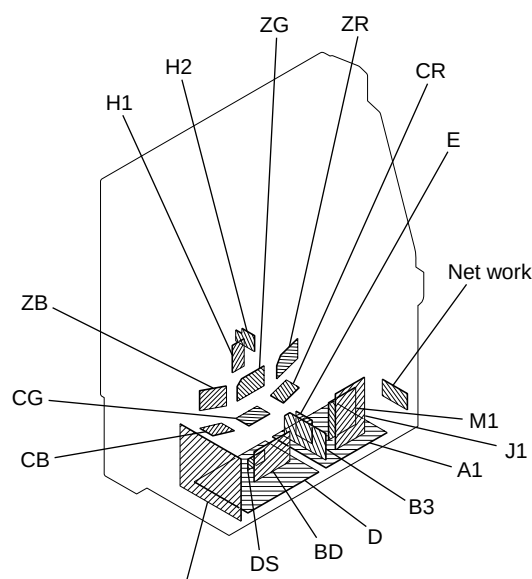
- **J1 BOARD SEMICONDUCTOR LOCATION**

IC		Q8323	D-2	②	Q8601	C-1	②	D8307	C-2	②
		Q8324	D-2	②	Q8602	C-1	②	D8308	B-2	②
(Component) Side	(Conductor) Side	Q8326		②	Q8603	C-1	②	D8309	B-2	②
IC8302	A-1	Q8327	D-2	①	Q8604 <td>C-1</td> <td>②</td> <td>D8310<td>B-2</td><td>②</td></td>	C-1	②	D8310 <td>B-2</td> <td>②</td>	B-2	②
IC8304		Q8328	D-2	①	Q8605 <td>C-2</td> <td>②</td> <td>D8311<td>A-2</td><td>②</td></td>	C-2	②	D8311 <td>A-2</td> <td>②</td>	A-2	②
	C-2	Q8332	D-2	②	Q8606 <td>C-2</td> <td>②</td> <td>D8312<td>B-2</td><td>②</td></td>	C-2	②	D8312 <td>B-2</td> <td>②</td>	B-2	②
	C-1	Q8338		D-2	Q8607 <td>C-2</td> <td>②</td> <td>D8313<td>A-2</td><td>②</td></td>	C-2	②	D8313 <td>A-2</td> <td>②</td>	A-2	②
IC8308	C-1	Q8340	D-1	②	Q8801 <td>C-2</td> <td>②</td> <td>D8314<td>A-2</td><td>②</td></td>	C-2	②	D8314 <td>A-2</td> <td>②</td>	A-2	②
IC8308	C-2	Q8401		C-1	Q8802 <td>C-2</td> <td>②</td> <td>D8315<td>B-2</td><td>②</td></td>	C-2	②	D8315 <td>B-2</td> <td>②</td>	B-2	②
IC8309	D-1	Q8402		C-2	Q8803		D-2	D8316 <td>B-2</td> <td>②</td>	B-2	②
IC8310	D-1	Q8405		D-2	Q8804		D-1	D8317 <td>B-2</td> <td>②</td>	B-2	②
IC8311	D-1	Q8406		D-2	Q8805	D-2	②	D8318 <td>B-2</td> <td>②</td>	B-2	②
IC8312	E-2	Q8407		D-2	Q8807	D-2	②	D8319 <td>B-2</td> <td>②</td>	B-2	②
IC8801	C-2	Q8408		D-2	Q8808	D-2	②	D8320	A-2	②
TRANSISTOR					Q8409	E-1	②	Q8809	D-2	②
					Q8410	E-1	②	Q8810	C-2	②
					Q8411	E-1	②	Q8811	C-2	②
					Q8412	E-1	②	D8323		
					Q8413	E-1	②	D8324		
					Q8414	E-1	②	D8325		
Q8301	A-2	①				DIODE			D8331	D-2
Q8302	A-2	①							D8332	B-1
Q8303	A-2	①				(Component) Side (Conductor) Side *			D8333	B-1
Q8304	A-2	①				D8101	A-1	②	D8334	B-1
Q8306	A-2	①				D8102	A-1	②	D8335	B-2
Q8307	E-2	②				D8103	A-1	②	D8336	B-2
Q8308	A-2	①				D8104	A-1	②	D8337	D-1
Q8309	A-2	①				D8301	A-2	②		
Q8316	D-2	②				D8302	B-2	②		
Q8317	D-2	②				D8303	B-2	②		
Q8318	D-2	②				D8304	B-2	②		
Q8319	D-2	②				D8305	C-2	②		
Q8321	B-1	①				D8306	B-2	②	CRYSTAL	
Q8322	B-1	①							(Component) Side (Conductor) Side	
								X8301	D-1	②
								X8302	D-1	②

***: Refer to Terminal name of
semiconductors in silk screen
printed circuit (see page 110)**

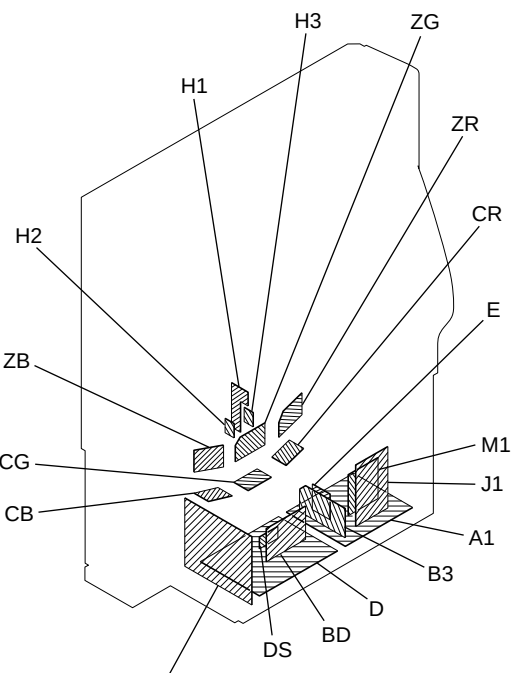
7-3. CIRCUIT BOARDS LOCATION

- KP-ES43



G (KP-ES43HK1/SN1)
G1 (KP-ES43ME1/MN1)

- **KP-ES48/ES53/ES61**



G (KP-ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
G1 (KP-ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)

7-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- The parts marked “#” on schematic diagrams are not mounted.
- All capacitors are in μF unless otherwise noted. (pF : $\mu\mu\text{F}$)
Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating
electrical power, is as follows.

Pitch: 5 mm
Rating electrical power 1/4 W (CHIP : 1/10 W)

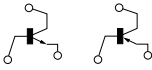
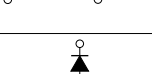
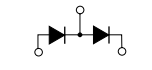
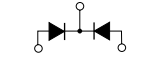
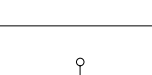
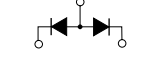
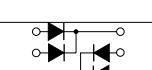
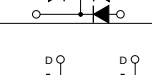
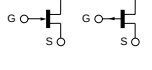
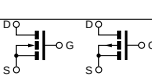
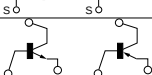
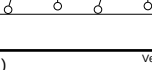
- All resistors are in ohms.
-  : nonflammable resistor.
-  : fusible resistor.
-  : internal component.
-  : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- $\perp$: earth-ground.
-  : earth-chassis.
- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- * : Can not be measured.
- NO MARK: Common
- < > : SECAM
- () : NTSC 3.58 MHz
- Circled numbers are waveform references.
-  : B + bus.
-  : B - bus.
-  : Signal path.

Reference information

RESISTOR	: RN	METAL FILM	
	: RC	SOLID	
	: FPRD	NONFLAMMABLE CARBON	
	: FUSE	NONFLAMMABLE FUSIBLE	
	: RW	NONFLAMMABLE WIREWOUND	
COIL	: RS	NONFLAMMABLE METAL OXIDE	
	: RB	NONFLAMMABLE CEMENT	
	: LF-8L	MICRO INDUCTOR	
	CAPACITOR	: TA	TANTALUM
		: PS	STYROL
: PP		POLYPROPYLENE	
: PT		MYLAR	
: MPS		METALIZED POLYESTER	
: MPP		METALIZED POLYPROPYLENE	
: ALB		BIPOLAR	
: ALT	HIGH TEMPERATURE		
	: ALR	HIGH RIPPLE	

Note: The components identified by shading and marked with a are critical for safety. Replace only with part number specified.

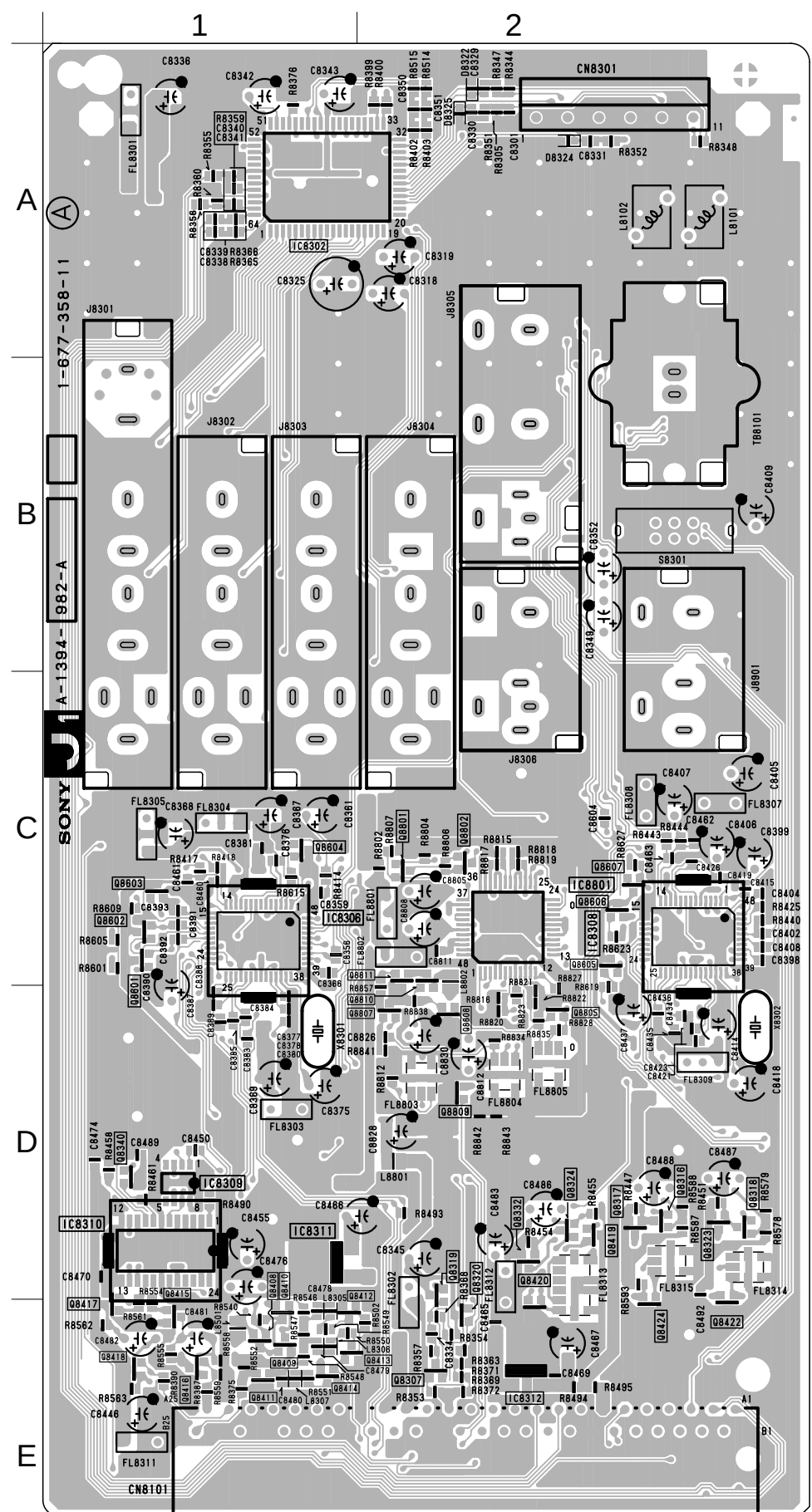
Terminal name of semiconductors in silk screen printed circuit (*)

	Device	Printed symbol	Terminal name	Circuit
①	Transistor		Collector Base Emitter	
②	Transistor		Collector Base Emitter	
③	Diode		Cathode Anode	
④	Diode		Cathode Anode (NC)	
⑤	Diode		Cathode Anode (NC)	
⑥	Diode		Common Anode Cathode	
⑦	Diode		Common Anode Cathode	
⑧	Diode		Common Anode Cathode	
⑨	Diode		Common Anode Cathode	
⑩	Diode		Common Cathode Anode	
⑪	Diode		Common Cathode Anode	
⑫	Diode		Anode Cathode Anode Cathode	
⑬	Transistor (FET)		Drain Source Gate	
⑭	Transistor (FET)		Drain Source Gate	
⑮	Transistor (FET)		Drain Source Gate	
⑯	Transistor		Emitter Collector Base	
—	Discrete semiconductor			

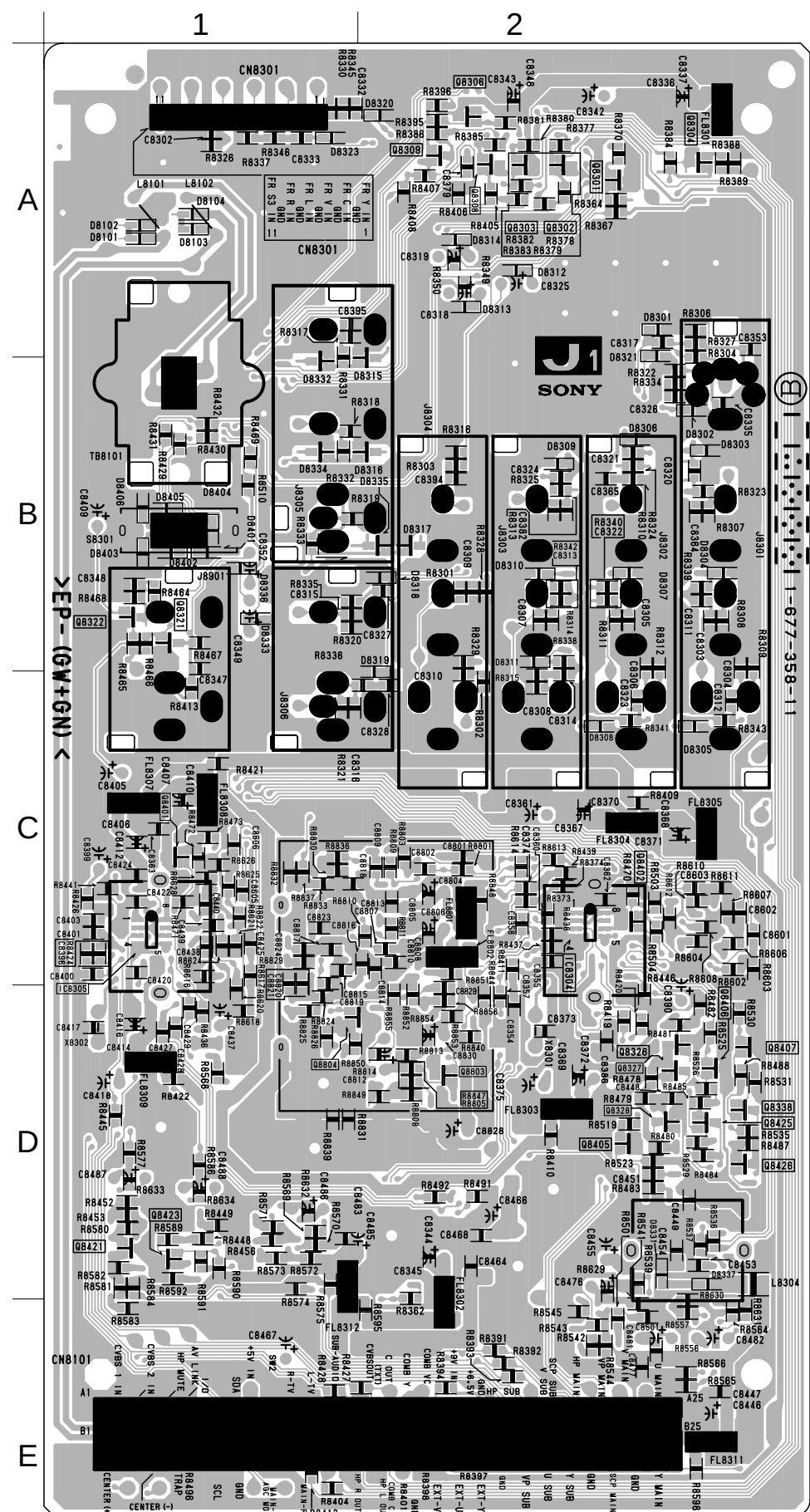
(Chip semiconductors that are not actually used are included.)

Ver.1.5

– J1 Board – (Component Side)



(Conductor Side)



J1 (1/2) BOARD WAVEFORMS

①	② PAL/NTSC	③ SECAM	④ PAL	⑤ SECAM	⑥ PAL/SECAM	⑦ NTSC	⑧ NTSC

J1 (1/2) (AV SELECT SWITCH) VIDEO PROCESS

WAVEFORMS:

⑦ PAL/NTSC	⑦ SECAM	⑧	⑨	⑩	⑪	⑫	⑬ PAL/NTSC	⑬ SECAM	⑭ PAL/NTSC	⑭ SECAM

Legend:

- Y: Y (Luminance)
- B-Y: B-Y (Blue-Difference)
- R-Y: R-Y (Red-Difference)
- G-Y: G-Y (Green-Difference)
- S: S (Stereo)
- HP: HP (Headphone)
- VP: VP (Variable)
- Y.M: Y.M (Y-Matrix)
- U.M: U.M (U-Matrix)
- V.M: V.M (V-Matrix)
- Y.S: Y.S (Y-Signal)
- U.S: U.S (U-Signal)
- V.S: V.S (V-Signal)

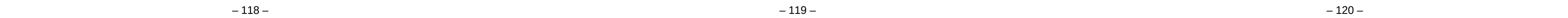
Notes:

- TO H2 BOARD CN3203
- TO H3 BOARD CN3301
- TO H4 BOARD CN3401
- TO H5 BOARD CN3501
- TO H6 BOARD CN3601
- TO H7 BOARD CN3701
- TO H8 BOARD CN3801
- TO H9 BOARD CN3901
- TO H10 BOARD CN4001
- TO H11 BOARD CN4101
- TO H12 BOARD CN4201
- TO H13 BOARD CN4301
- TO H14 BOARD CN4401
- TO H15 BOARD CN4501
- TO H16 BOARD CN4601
- TO H17 BOARD CN4701
- TO H18 BOARD CN4801
- TO H19 BOARD CN4901
- TO H20 BOARD CN5001
- TO H21 BOARD CN5101
- TO H22 BOARD CN5201
- TO H23 BOARD CN5301
- TO H24 BOARD CN5401
- TO H25 BOARD CN5501
- TO H26 BOARD CN5601
- TO H27 BOARD CN5701
- TO H28 BOARD CN5801
- TO H29 BOARD CN5901
- TO H30 BOARD CN6001
- TO H31 BOARD CN6101
- TO H32 BOARD CN6201
- TO H33 BOARD CN6301
- TO H34 BOARD CN6401
- TO H35 BOARD CN6501
- TO H36 BOARD CN6601
- TO H37 BOARD CN6701
- TO H38 BOARD CN6801
- TO H39 BOARD CN6901
- TO H40 BOARD CN7001
- TO H41 BOARD CN7101
- TO H42 BOARD CN7201
- TO H43 BOARD CN7301
- TO H44 BOARD CN7401
- TO H45 BOARD CN7501
- TO H46 BOARD CN7601
- TO H47 BOARD CN7701
- TO H48 BOARD CN7801
- TO H49 BOARD CN7901
- TO H50 BOARD CN8001
- TO H51 BOARD CN8101
- TO H52 BOARD CN8201
- TO H53 BOARD CN8301
- TO H54 BOARD CN8401
- TO H55 BOARD CN8501
- TO H56 BOARD CN8601
- TO H57 BOARD CN8701
- TO H58 BOARD CN8801
- TO H59 BOARD CN8901
- TO H60 BOARD CN9001
- TO H61 BOARD CN9101
- TO H62 BOARD CN9201
- TO H63 BOARD CN9301
- TO H64 BOARD CN9401
- TO H65 BOARD CN9501
- TO H66 BOARD CN9601
- TO H67 BOARD CN9701
- TO H68 BOARD CN9801
- TO H69 BOARD CN9901
- TO H70 BOARD CN10001

15 PAL: 0.8Vp-p (4.43MHz) SECAM: 0.8Vp-p (4.43MHz) NTSC: 0.9Vp-p (3.58MHz)	16 PAL 1.6Vp-p (H)	16 SECAM 1.6Vp-p (H)	17 PAL 1.3Vp-p (H)	17 SECAM 1.0Vp-p (H)	18 PAL/SECAM 1.6Vp-p (H)	19 PAL/NTSC 1.1Vp-p (H)	19 SECAM 1.0Vp-p (H)
20 0.7Vp-p (H)	21 0.7Vp-p (H)	22 1.2Vp-p (H)	23 1.0Vp-p (H)	24 1.3Vp-p (H)	25 1.2Vp-p (H)	26 1.2Vp-p (H)	

[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
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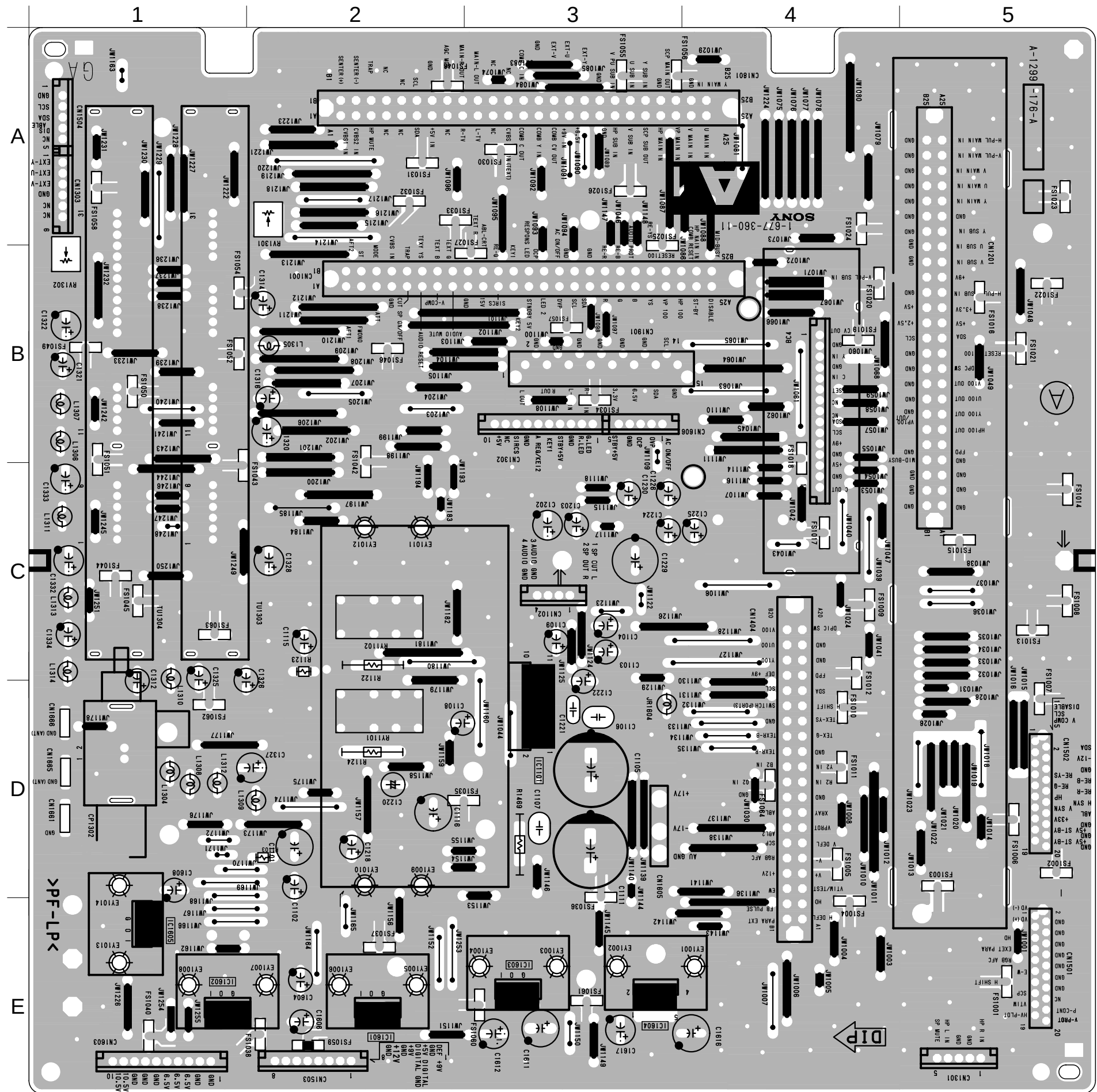


• A1 BOARD SEMICONDUCTOR LOCATION

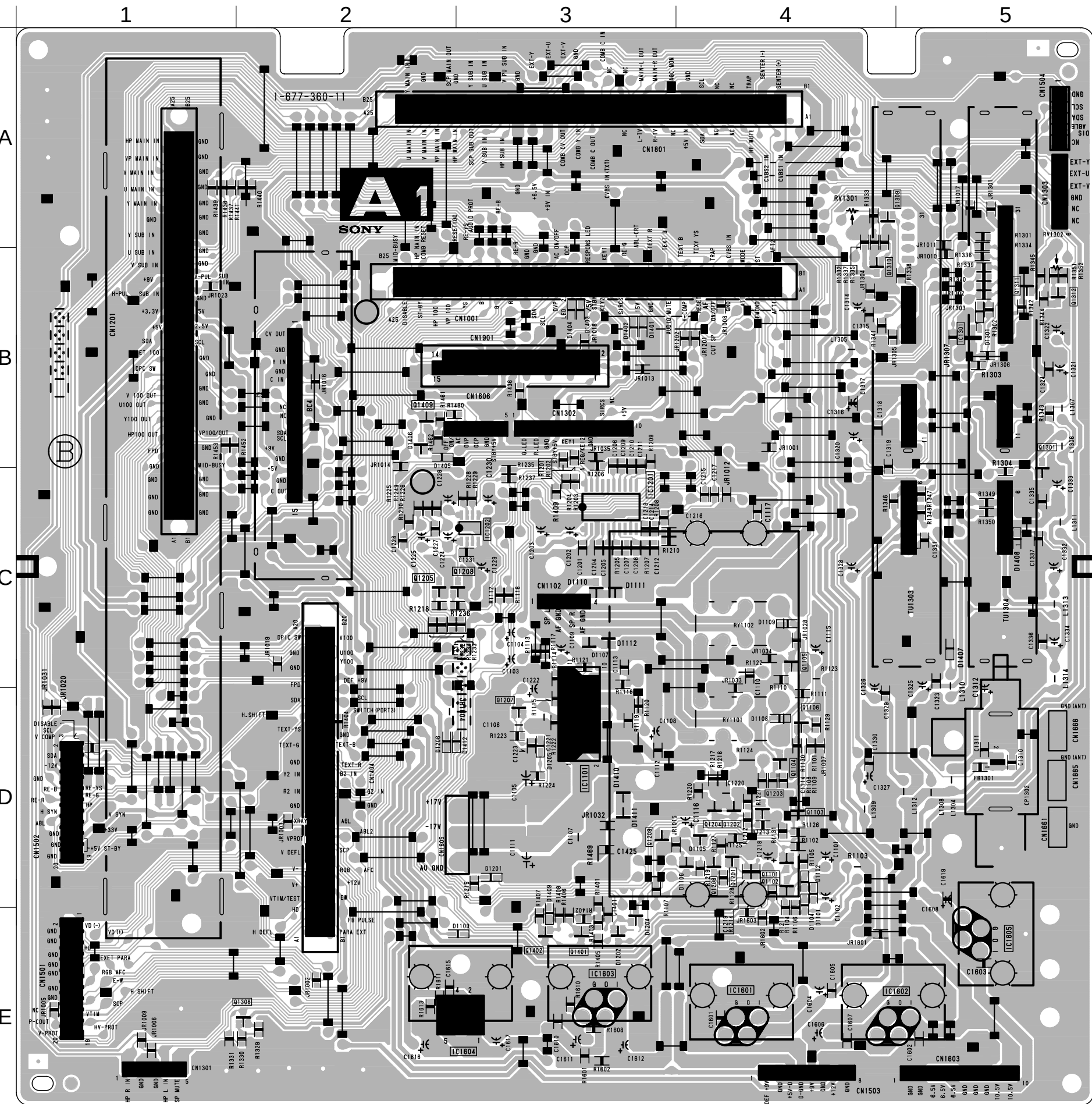
IC					
(Component Side)		(Conductor Side)			
IC1101		D-4	①	D1202	D-4 ①
IC1201		D-3	①	D1203	D-4 ①
IC1202		C-3	①	D1204	D-4 ①
IC1301		C-3	①	D1205	C-2 ①
IC1601	E-2	B-5	①	D1206	D-4 ①
IC1602	E-1	E-4	①	D1207	D-3 ①
IC1603	E-3	E-3	①	D1208	C-3 ①
IC1604	E-4	E-3	①	D1209	D-3 ①
IC1605	E-1	E-5	①	D1308	E-2 ①
				D1309	A-4 ①
				D1310	B-4 ①
				D1311	B-5 ①
				D1401	E-3 ①
				D1402	E-3 ①
				D1409	B-2 ①
TRANSISTOR					
(Component Side)		(Conductor Side)			
Q1101		D-4	①		
Q1102		D-4	①		
Q1103		D-4	①		
Q1104		D-4	①		
Q1105		C-4	①		
Q1106		D-4	①		
Q1201		D-4	①		
		DIODE			
		(Component Side)	(Conductor Side)		
			*	D1101	D-4 ①
				D1102	D-4 ①
				D1104	D-4 ①
				D1105	D-4 ①
				D1106	D-4 ①
				D1107	D-4 ①
				D1108	D-4 ①
				D1109	D-4 ①
				D1110	C-3 ①
				D1111	C-3 ①
				D1112	C-3 ①
				D1201	D-3 ①
				D1202	E-3 ①
				D1204	E-3 ①
				D1205	D-3 ①
				D1206	D-2 ①
				D1301	B-5 ①
				D1401	B-3 ①
				D1402	B-3 ①
				D1403	B-3 ①
				D1404	B-3 ①
				D1405	B-2 ①
				D1406	B-2 ①
				D1409	E-3 ①
				D1410	D-3 ①
				D1411	D-3 ①
				D1412	D-2 ①

※: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

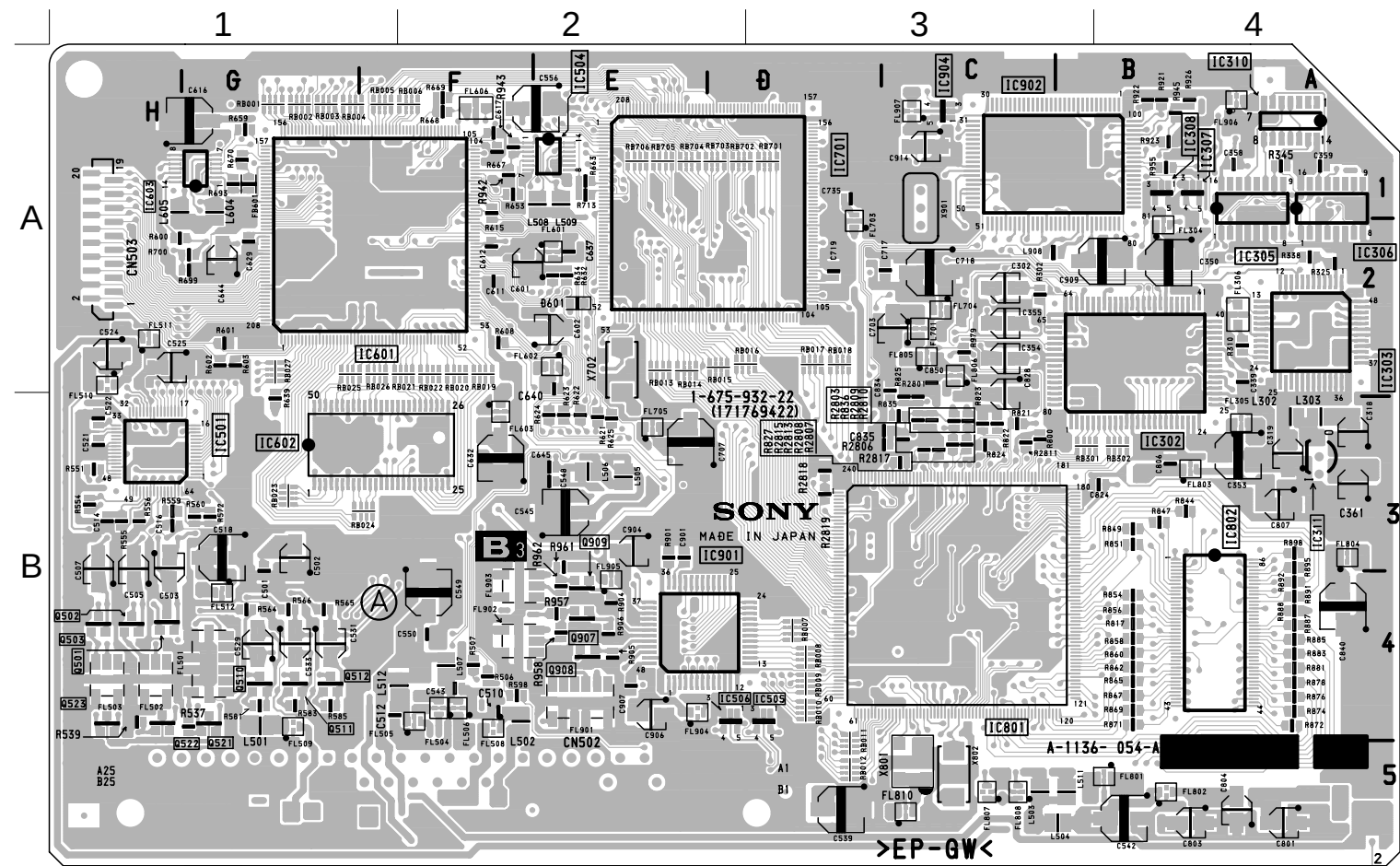
– A1 Board – (Component Side)



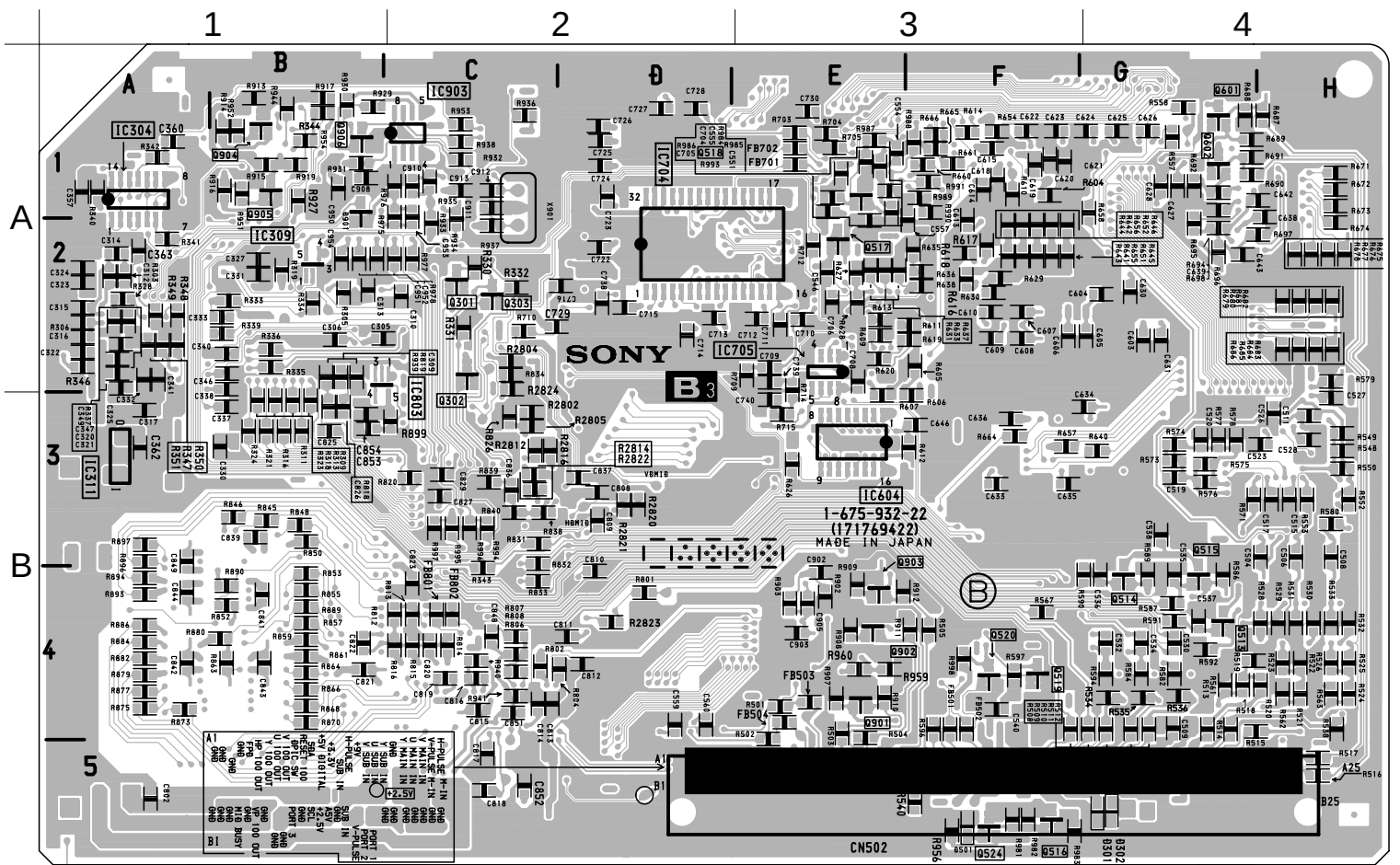
(Conductor Side)



– B3 Board – (Component Side)



(Conductor Side)

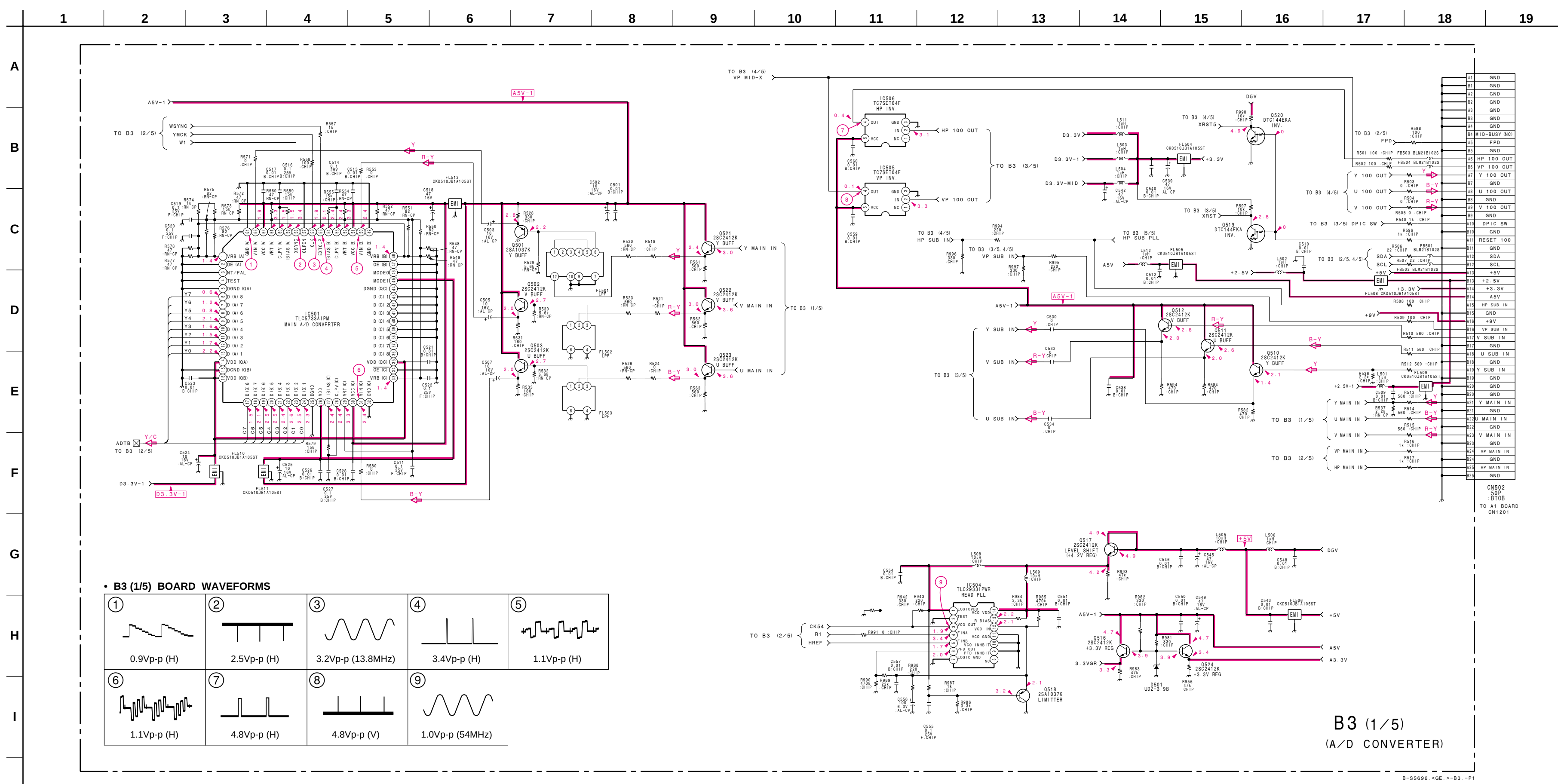


• B3 BOARD SEMICONDUCTOR LOCATION

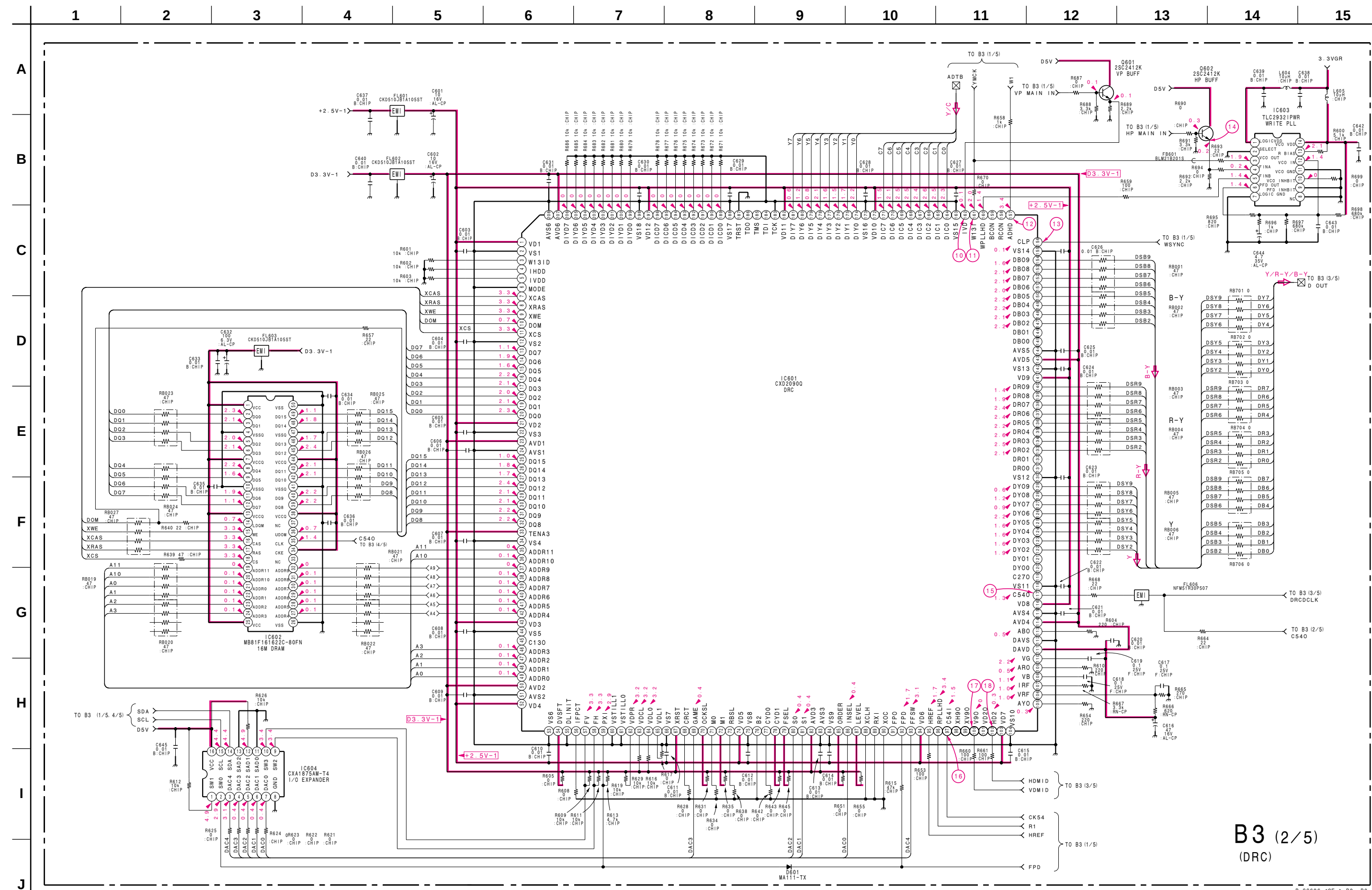
IC	TRANSISTOR	Q902	B-3	①
IC302	Q301	Q903	B-3	①
IC303	Q302	Q904	A-1	②
IC309	Q303	Q905	A-1	③
IC311	Q501	Q907	B-2	④
IC501	Q502	Q908	B-2	⑤
IC504	Q503	Q909	B-2	⑥
IC505	Q511			
IC506	Q512			
IC601	Q516			
IC602	Q517			
IC603	Q518			
IC604	Q519			
IC801	Q520			
IC802	Q521			
IC901	Q522			
IC902	Q523			
IC903	Q524			
IC904	Q601			
	Q602			
	Q901			

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

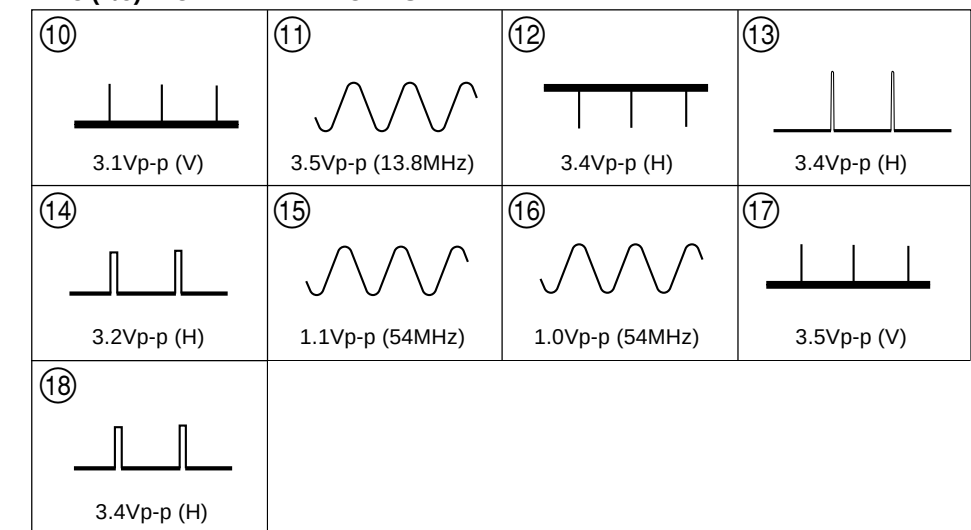
(4) Schematic Diagram of B3 (1/5) Board



(5) Schematic Diagram of B3 (2/5) Board

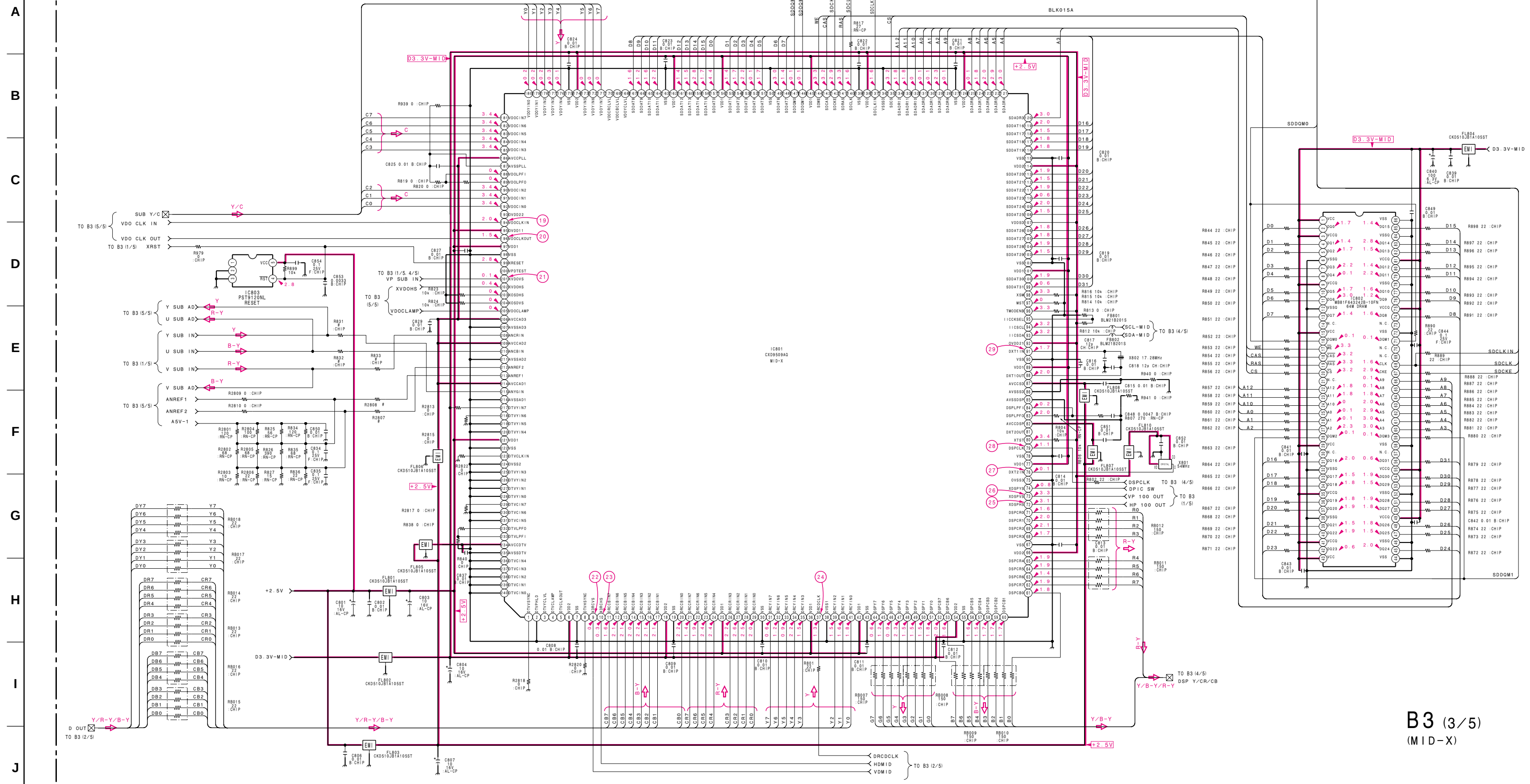
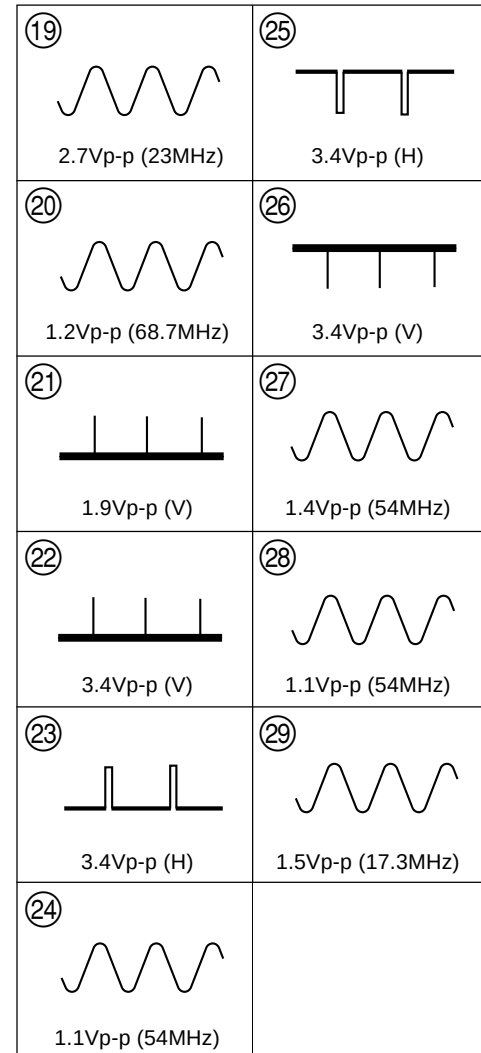


- **B3 (2/5) BOARD WAVEFORMS**

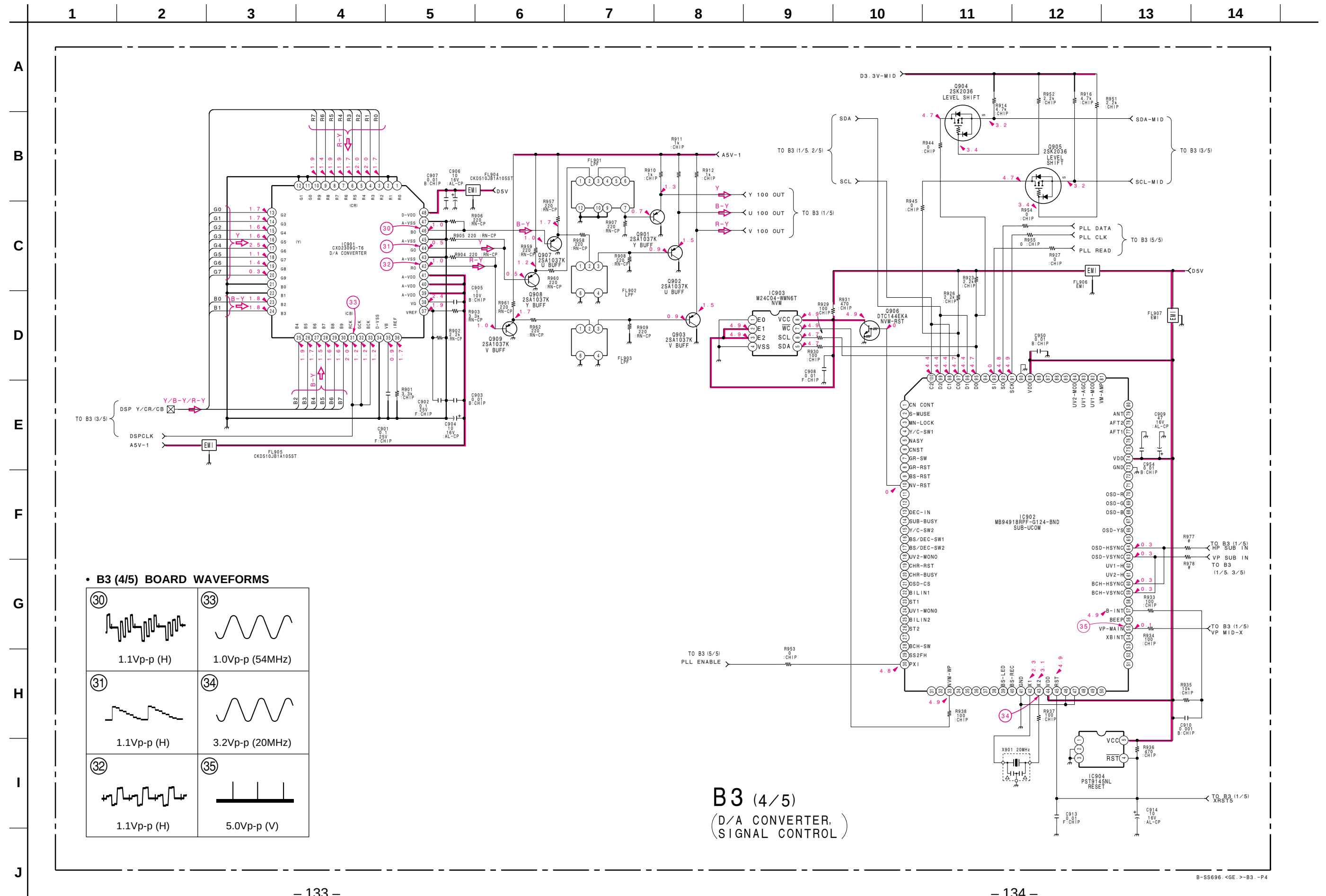


(6) Schematic Diagram of B3 (3/5) Board

• B3 (3/5) BOARD WAVEFORMS

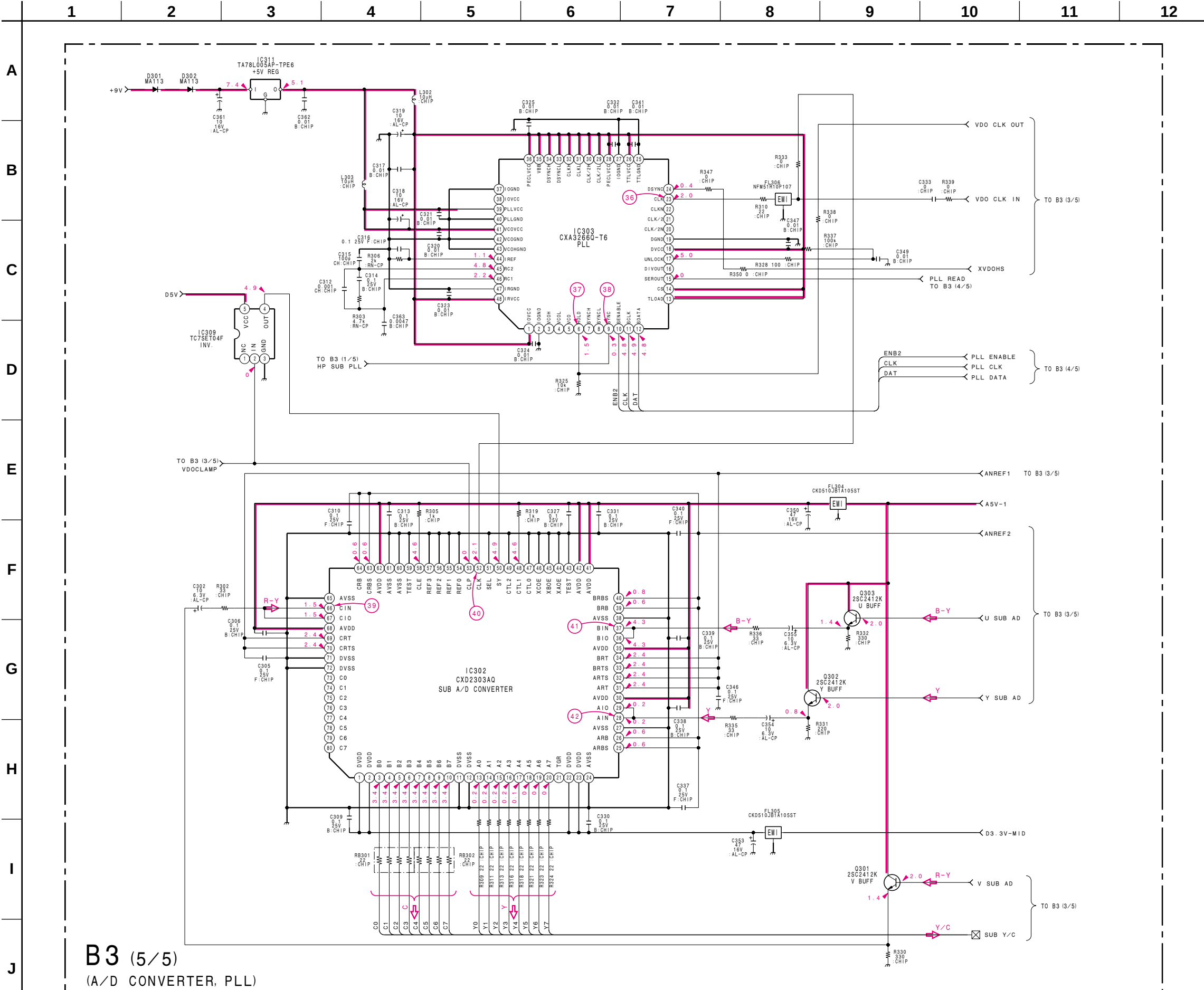
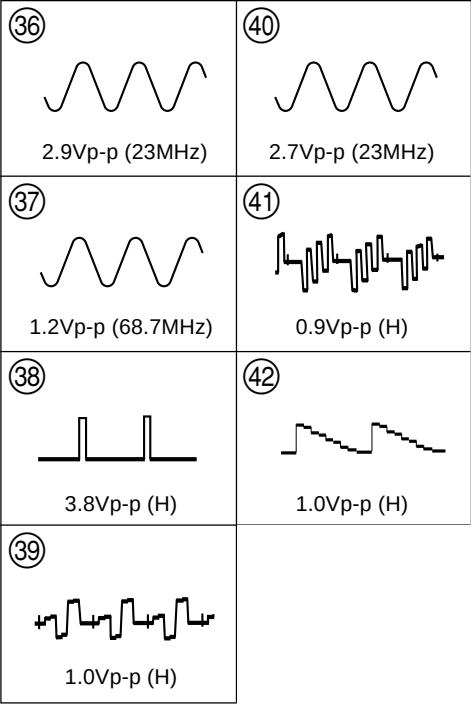
B3 (3/5)
(MID-X)

(7) Schematic Diagram of B3 (4/5) Board

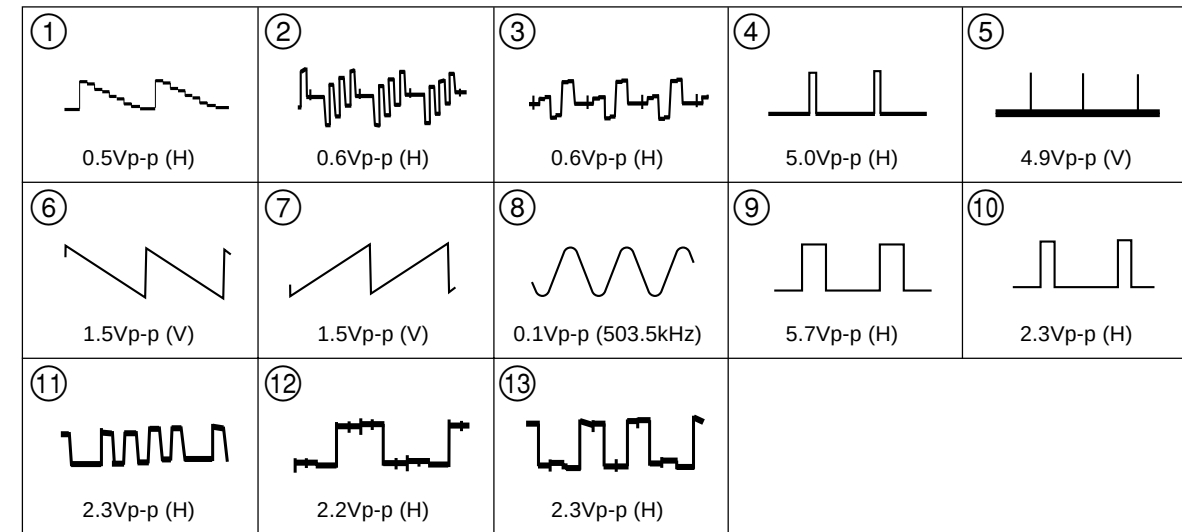


(8) Schematic Diagram of B3 (5/5) Board

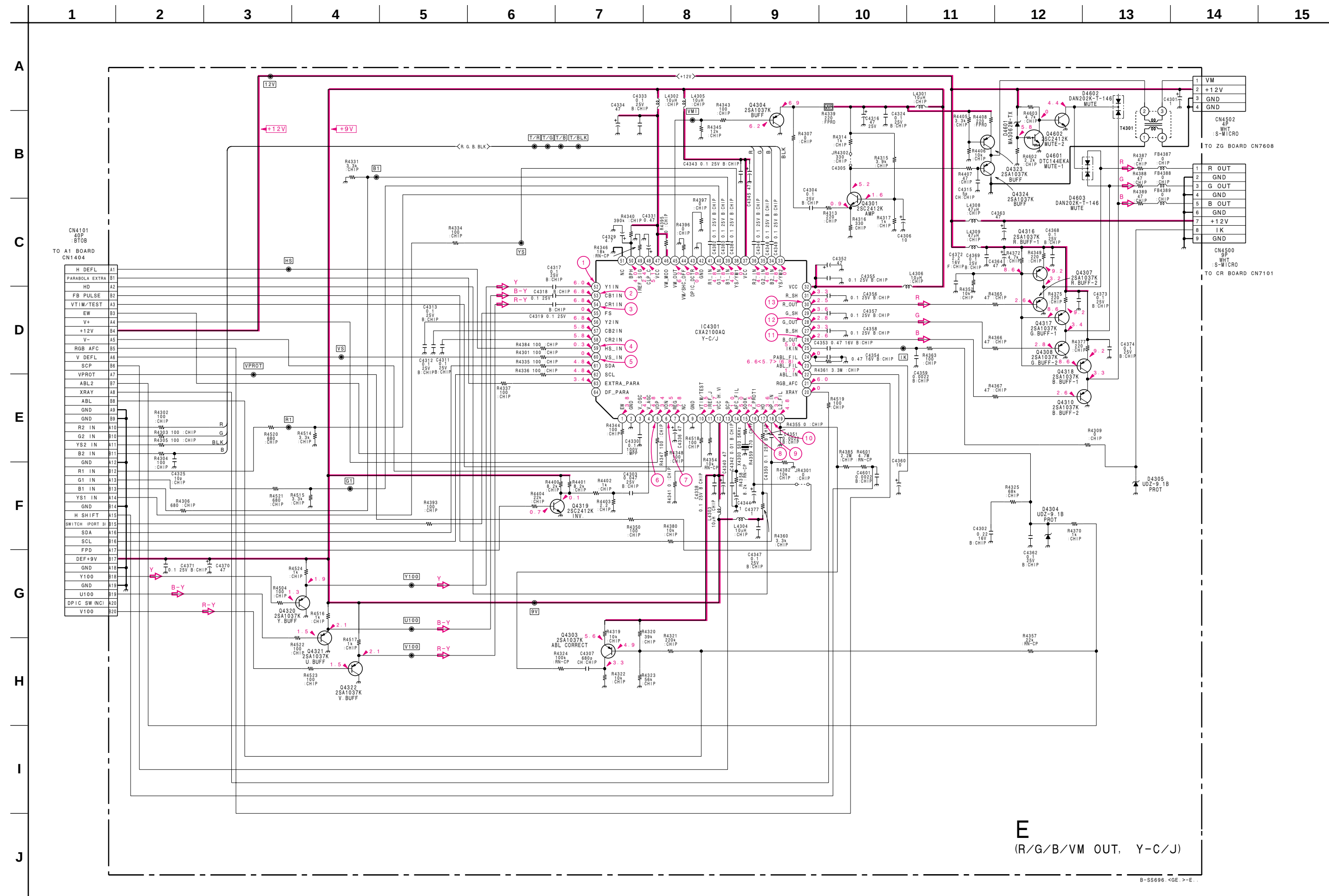
• B3 (5/5) BOARD WAVEFORMS



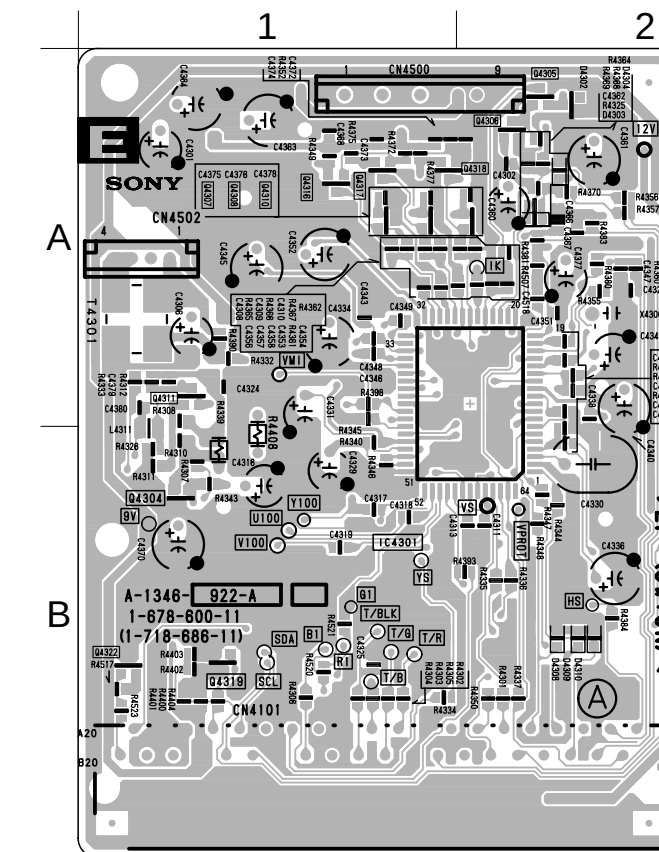
• E BOARD WAVEFORMS



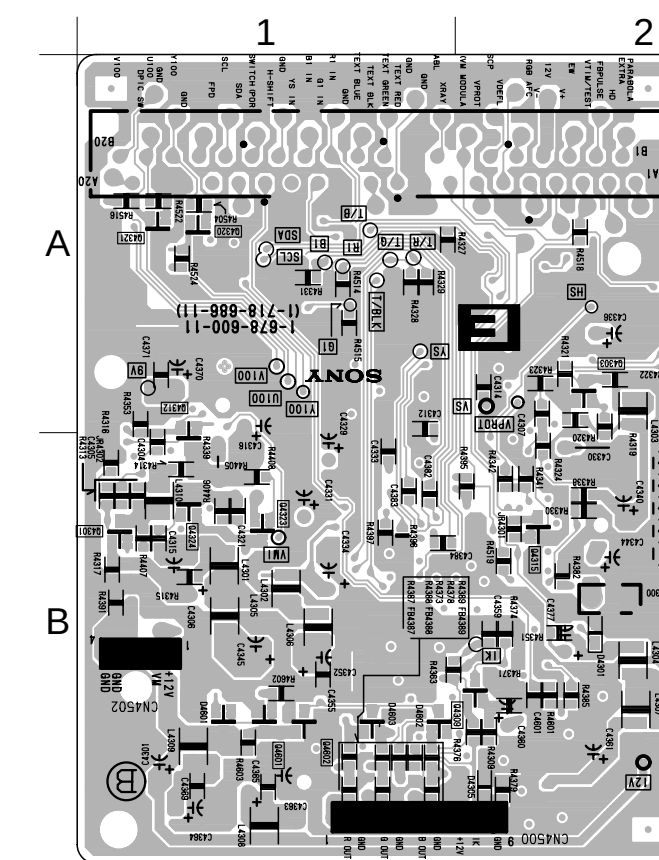
(9) Schematic Diagram of E Board



– E Board – (Component Side)



(Conductor Side)

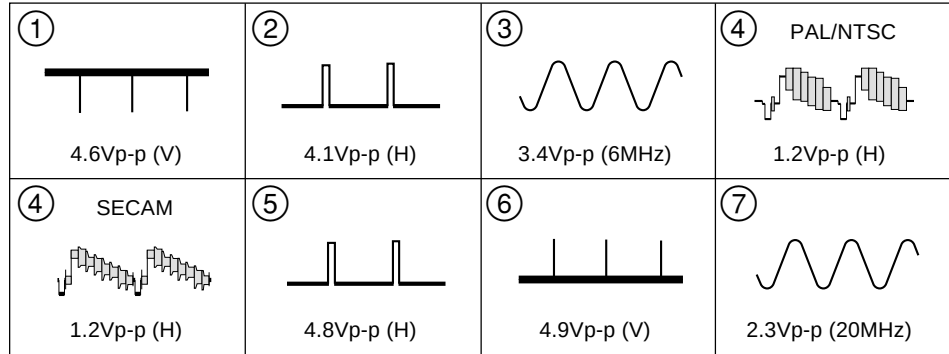


- E BOARD SEMICONDUCTOR LOCATION

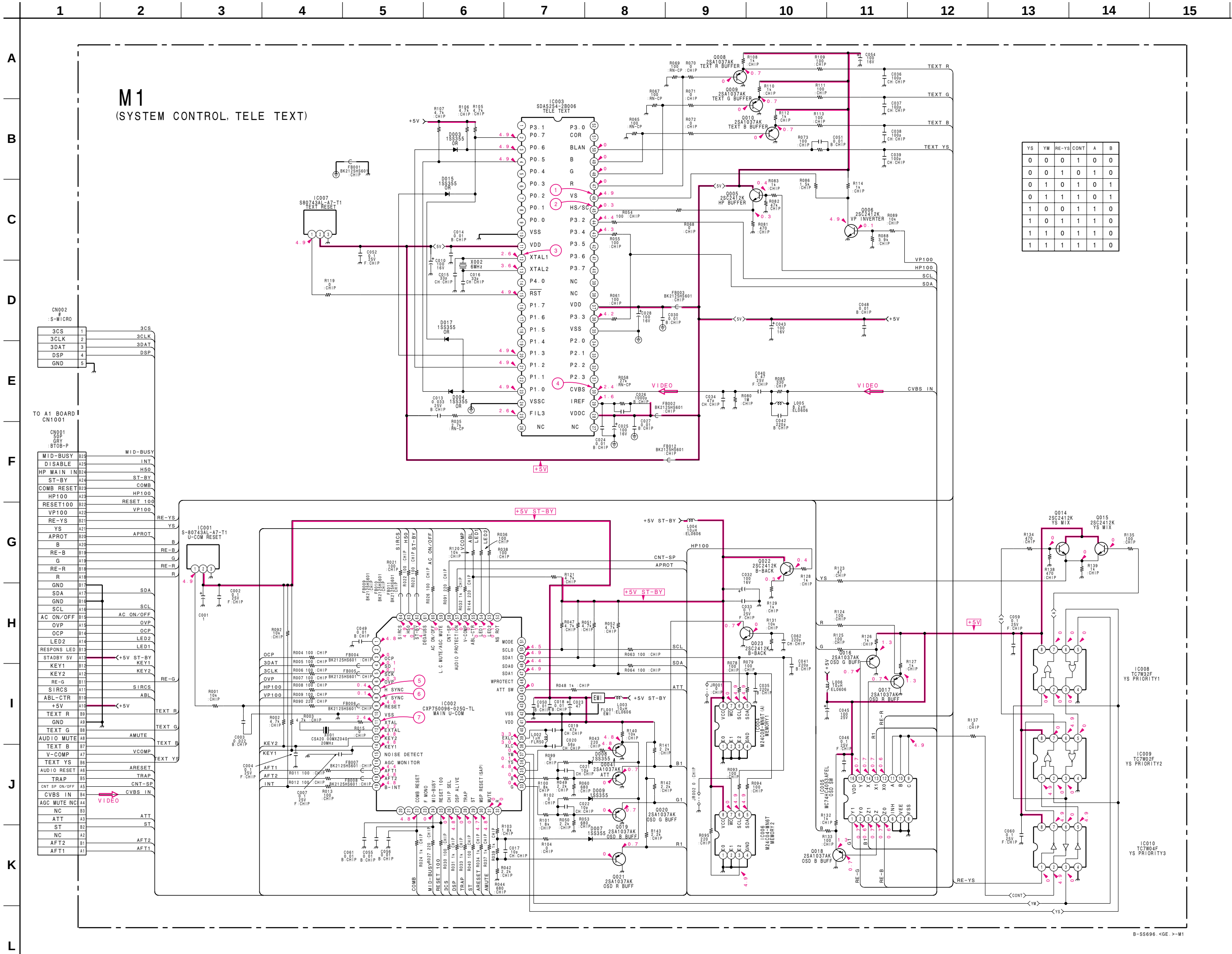
IC		Q4322	B-1
$\left(\begin{smallmatrix} \text{Component} \\ \text{Side} \end{smallmatrix} \right)$	$\left(\begin{smallmatrix} \text{Conductor} \\ \text{Side} \end{smallmatrix} \right)$	Q4323	B-1
IC4301	A-2	Q4324	B-1
		Q4601	B-1
		Q4602	B-1
TRANSISTOR		DIODE	
$\left(\begin{smallmatrix} \text{Component} \\ \text{Side} \end{smallmatrix} \right)$	$\left(\begin{smallmatrix} \text{Conductor} \\ \text{Side} \end{smallmatrix} \right)$	*	$\left(\begin{smallmatrix} \text{Component} \\ \text{Side} \end{smallmatrix} \right)$
Q4301	B-1	①	$\left(\begin{smallmatrix} \text{Conductor} \\ \text{Side} \end{smallmatrix} \right)$
Q4303	A-2	②	D4304
Q4304	B-1	③	D4305
Q4307	A-1	④	B-2
Q4308	A-1	⑤	B-1
Q4310	A-2	⑥	D4602
Q4316	A-1	⑦	B-1
Q4317	A-1	⑧	D4603
Q4318	A-1	⑨	
Q4319	B-1	⑩	
Q4320	A-1	⑪	CRYSTAL
Q4321	A-1	⑫	$\left(\begin{smallmatrix} \text{Component} \\ \text{Side} \end{smallmatrix} \right)$
			$\left(\begin{smallmatrix} \text{Conductor} \\ \text{Side} \end{smallmatrix} \right)$
		X4300	B-2

*: Refer to Terminal name of
semiconductors in silk screen
printed circuit (see page 110)

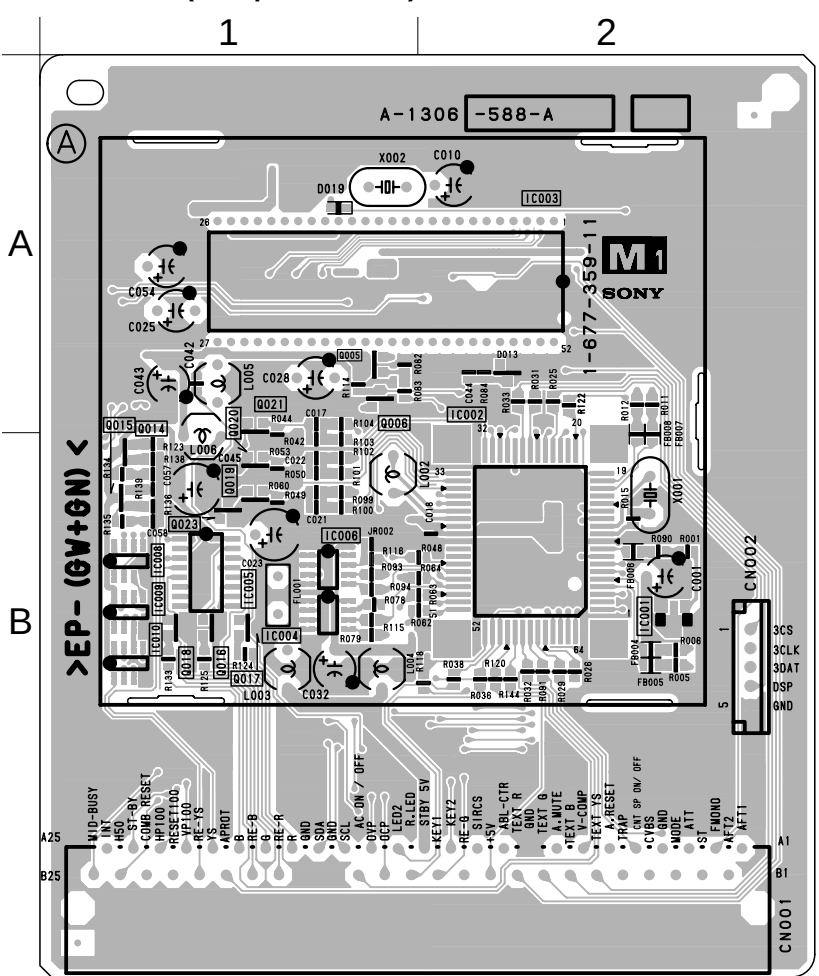
• M1 BOARD WAVEFORMS



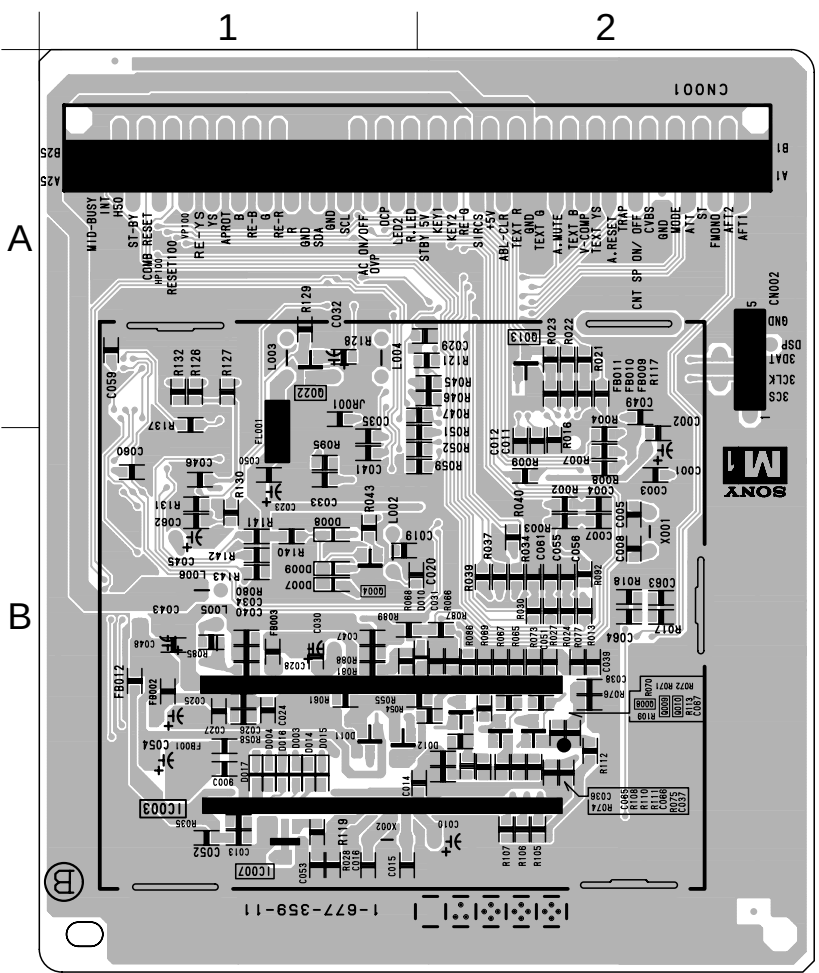
(10) Schematic Diagram of M1 Board



– M1 Board – (Component Side)



(Conductor Side)

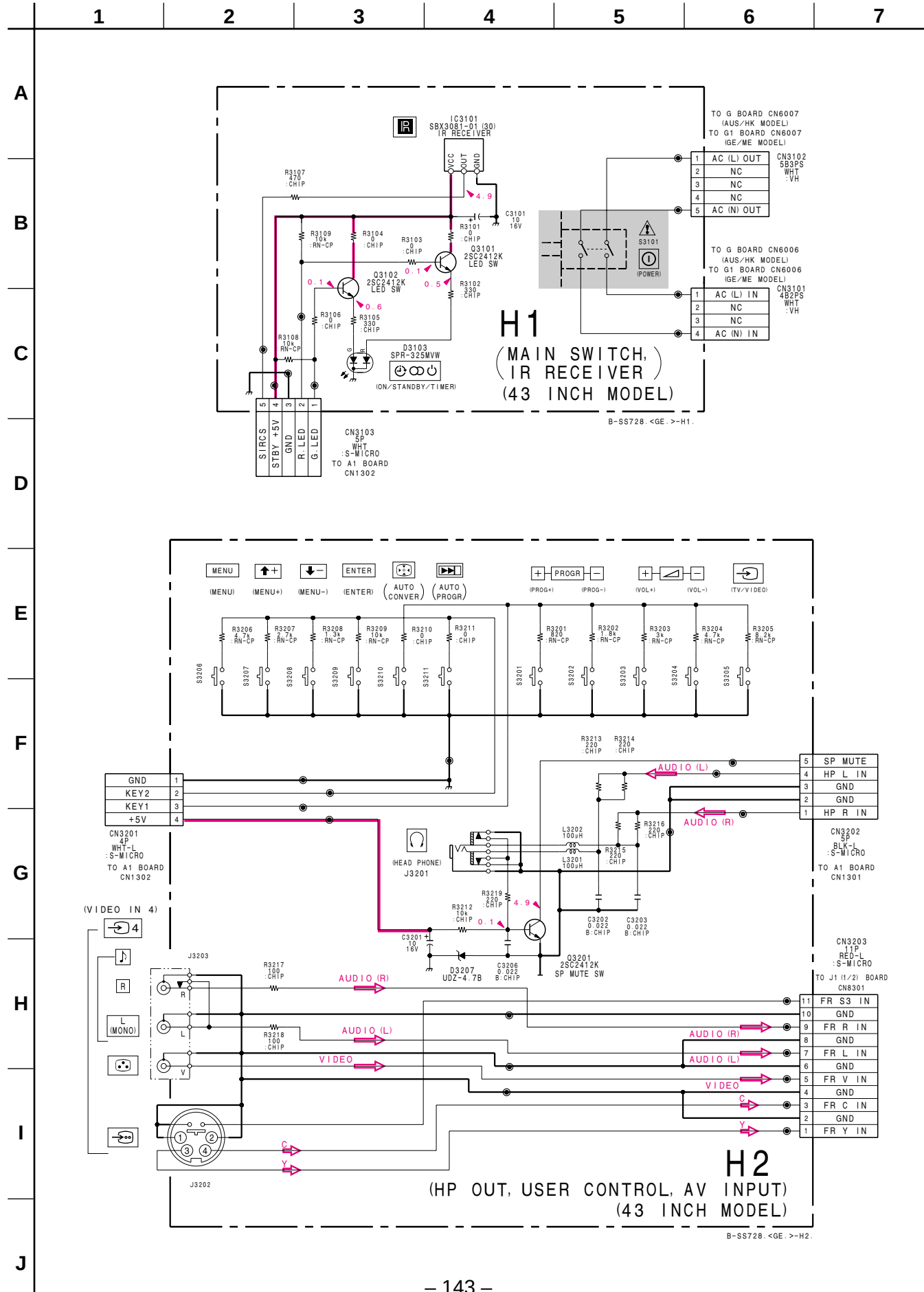


• M1 BOARD SEMICONDUCTOR LOCATION

IC	TRANSISTOR	DIODE
IC001 B-2	Q004 A-1	D003 A-2
IC002 B-2	Q005 A-1	D004 A-2
IC003 A-1	Q006 A-1	D007 A-2
IC004 B-1	Q008 B-2	D008 A-2
IC005 B-1	Q009 B-2	D009 A-2
IC006 B-1	Q010 B-2	D015 A-2
IC007 B-1	Q014 B-1	D017 A-2
IC008 B-1	Q015 B-1	
IC009 B-1	Q016 B-1	
IC010 B-1	Q017 B-1	
	Q018 B-1	
	Q019 B-1	
	Q020 B-1	
	Q021 A-1	
	Q022 B-1	
	Q023 B-1	

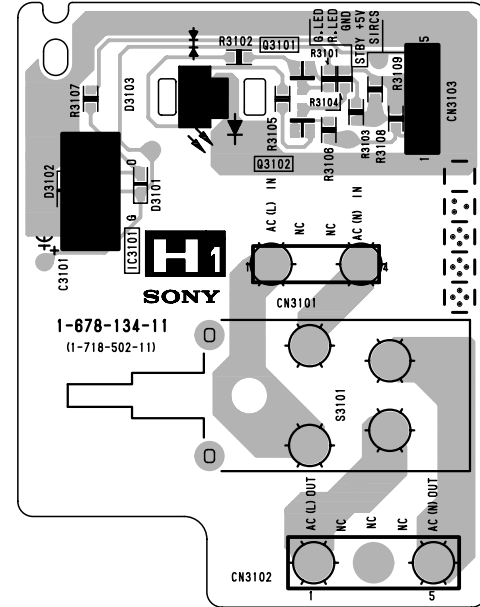
*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

(11) Schematic Diagrams of H1, H2 Boards (KP-ES43)



H1 [MAIN SWITCH, IR RECEIVER] **H2** [HP OUT, USER CONTROL, AV INPUT]

- H1 BOARD - (KP-ES43)

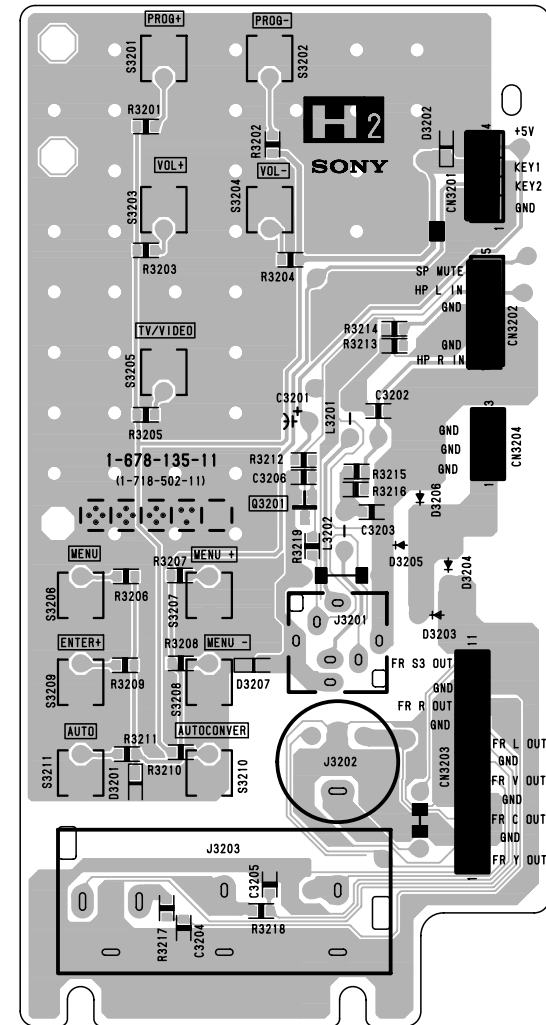


H1 BOARD
Terminal name of semiconductors in silk screen printed circuit (*)

Ref.	*
D3103	③
Q3101, 3102	①

※: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

- H2 BOARD - (KP-ES43)

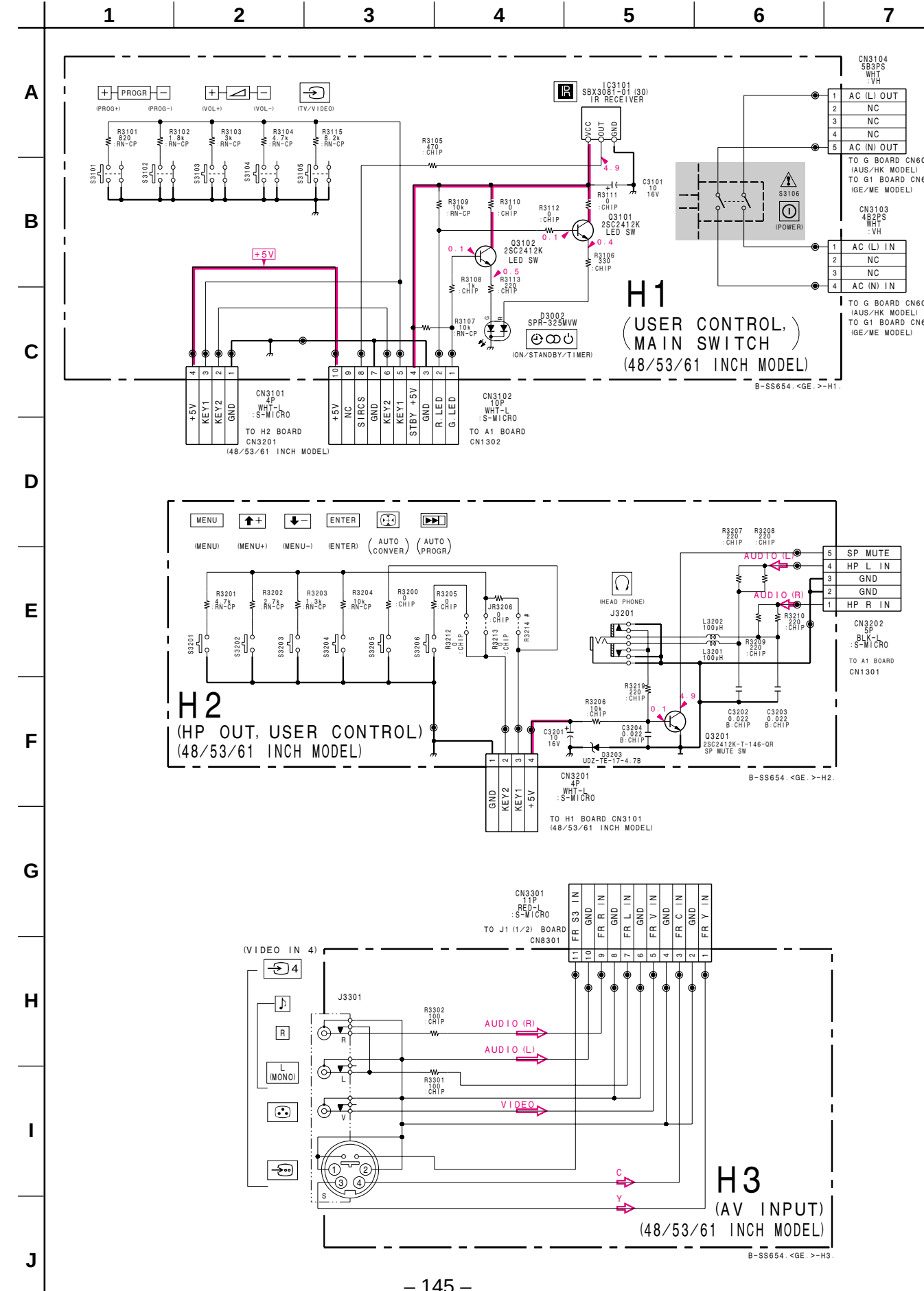


H2 BOARD
Terminal name of semiconductors in silk screen printed circuit (*)

Ref.	*
D3207	③
Q3201	①

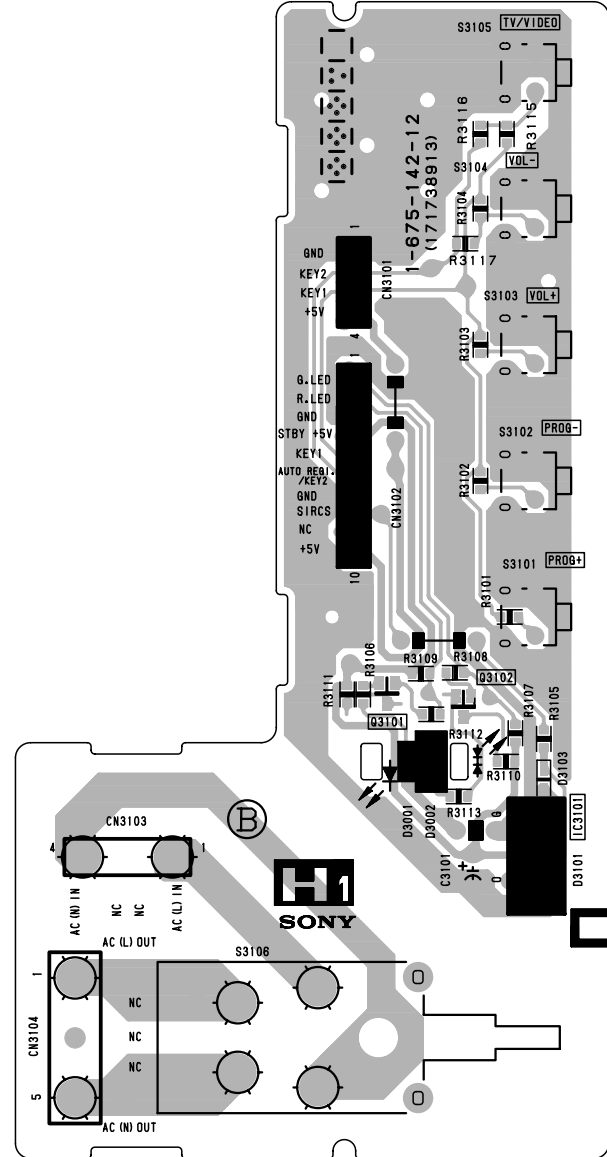
※: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

(12) Schematic Diagrams of H1, H2 and H3 Boards (KP-ES48/53/61)



H1 [USER CONTROL, MAIN SWITCH] **H2** [HP OUT, USER CONTROL] **H3** [AV INPUT]

- H1 BOARD - (KP-ES48/53/61)

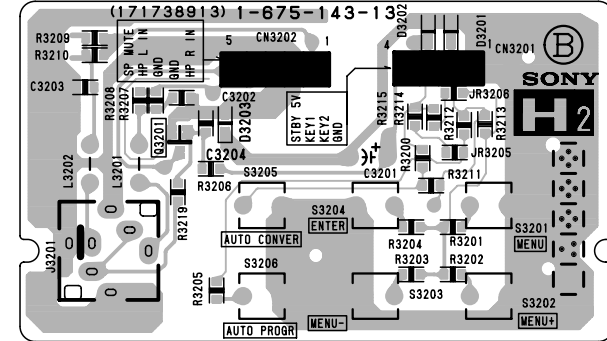


H1 BOARD
Terminal name of semiconductors in silk screen printed circuit (*)

Ref.	*
Q3101, Q3102	①

※: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

- H2 BOARD - (KP-ES48/53/61)

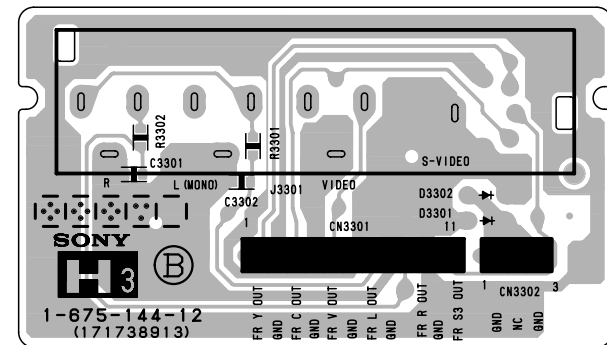


H2 BOARD
Terminal name of semiconductors in silk screen printed circuit (*)

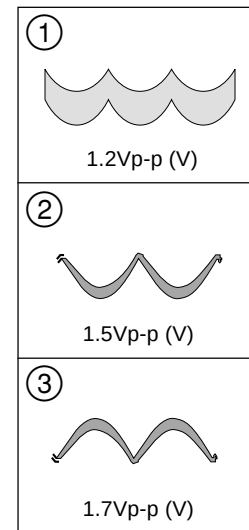
Ref.	*
D3203	③
Q3201	①

※: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

- H3 BOARD - (KP-ES48/53/61)



DS [SHADING]

[illegible]

**Terminal name of semiconductors
in silk screen printed circuit (*)**

Ref.	*
D3501, D3503	③
D3502	⑩

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

$\boxed{H_1} \quad \boxed{H_2}$

← **H₁** **H₂** **H₃** boards

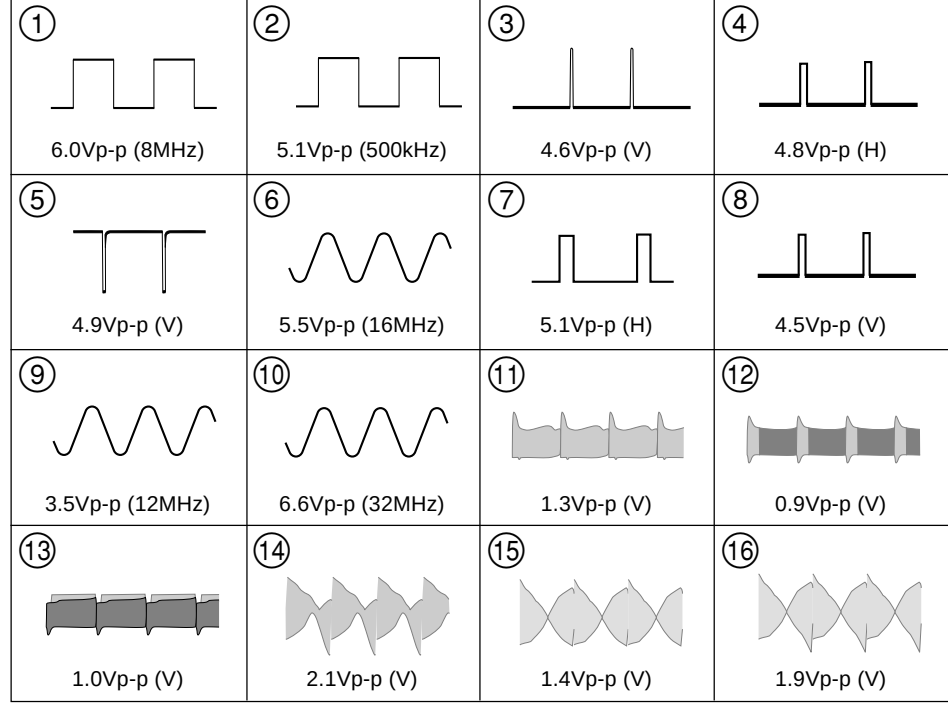
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

- D BOARD SEMICONDUCTOR LOCATION

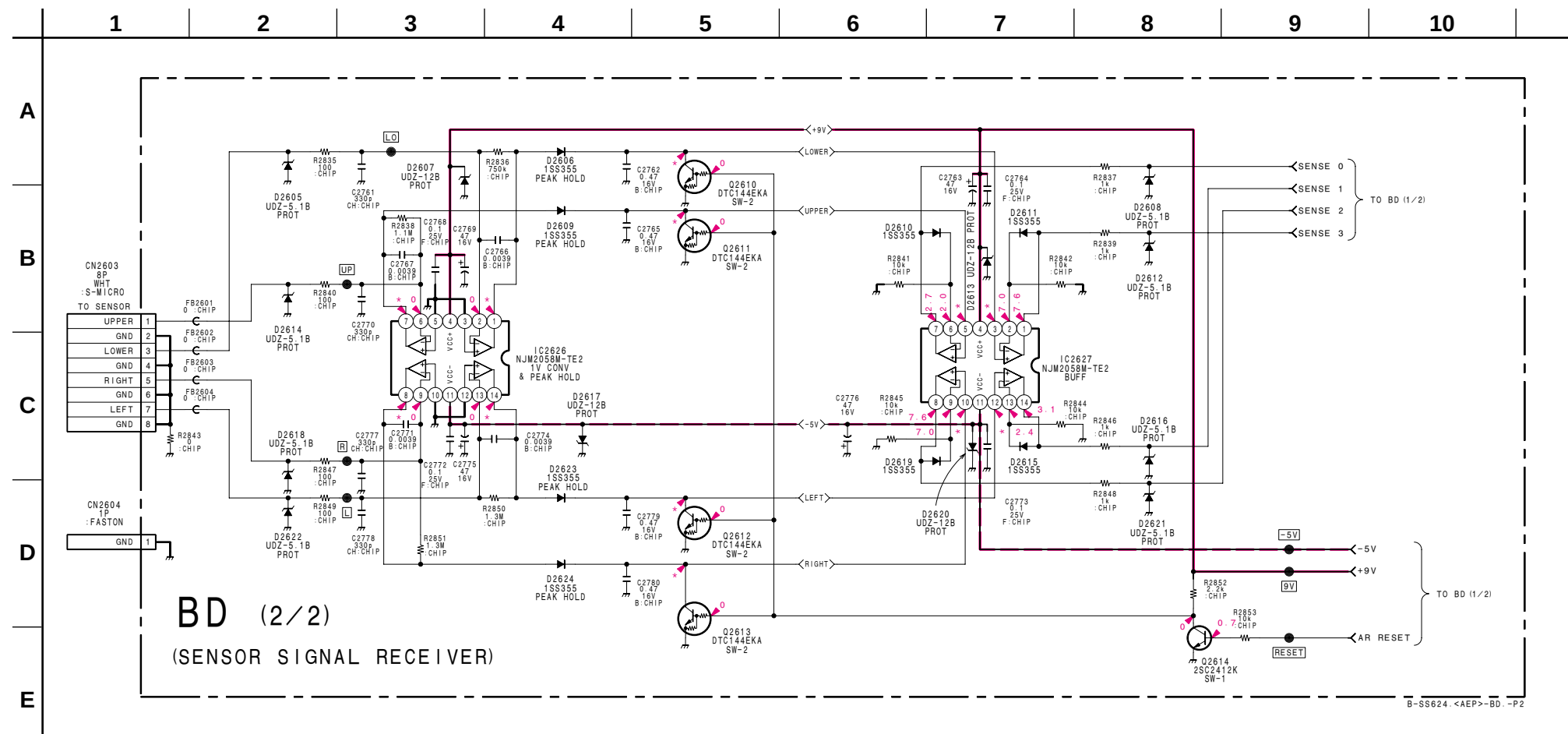
IC		Q5102	E-1	-	DIODE		D5208	E-3	-
IC5103 C-6 IC5104 C-5 IC5105 C-4 IC5106 C-5 IC5107 D-5 IC5201 E-3 IC5301 E-6 IC5302 E-5 IC5303 E-6 IC5401 C-4 IC5501 A-6 IC5502 A-3 IC5703 D-4		Q5104	C-1	-			D5301	E-6	-
		Q5105	E-1	-			D5302	E-6	-
		Q5106	E-3	-			D5303	E-4	-
		Q5201	E-4	①	D5001	D-6	-	D5304	E-4
		Q5302	E-6	①	D5002	D-6	-	D5305	E-6
		Q5303	E-6	①	D5006	D-6	-	D5306	E-6
		Q5401	D-4	①	D5101	A-1	-	D5307	E-6
		Q5402	D-5	①	D5107	C-2	-	D5308	D-4
		Q5403	D-4	①	D5108	D-2	-	D5309	E-5
		Q5501	B-6	-	D5114	D-1	-	D5401	D-4
		Q5502	B-4	-	D5115	A-2	-	D5402	D-4
		Q5503	A-5	-	D5116	D-1	-	D5701	D-7
		Q5504	A-5	-	D5117	A-1	-	D5704	E-7
		Q5505	B-5	-	D5118	A-1	-	D5719	D-4
		Q5506	B-5	-	D5121	B-3	-	D5721	D-4
		Q5704	E-1	-	D5122	B-3	-	D5724	C-3
TRANSISTOR		Q5705	E-2	-	D5201	E-4	-	D5726	E-3
		Q5706	E-3	-	D5202	E-4	-	D5727	E-3
		Q5707	E-3	-	D5203	E-4	-	D5732	E-3
		Q5710	E-3	①	D5204	E-3	-		
		Q5711	E-3	①	D5205	E-3	-		
Q5006	D-6	①			D5207	E-3	-		
Q5009	D-6	①							

***: Refer to Terminal name of
semiconductors in silk screen
printed circuit (see page 110)**

• BD (1/2) BOARD WAVEFORMS



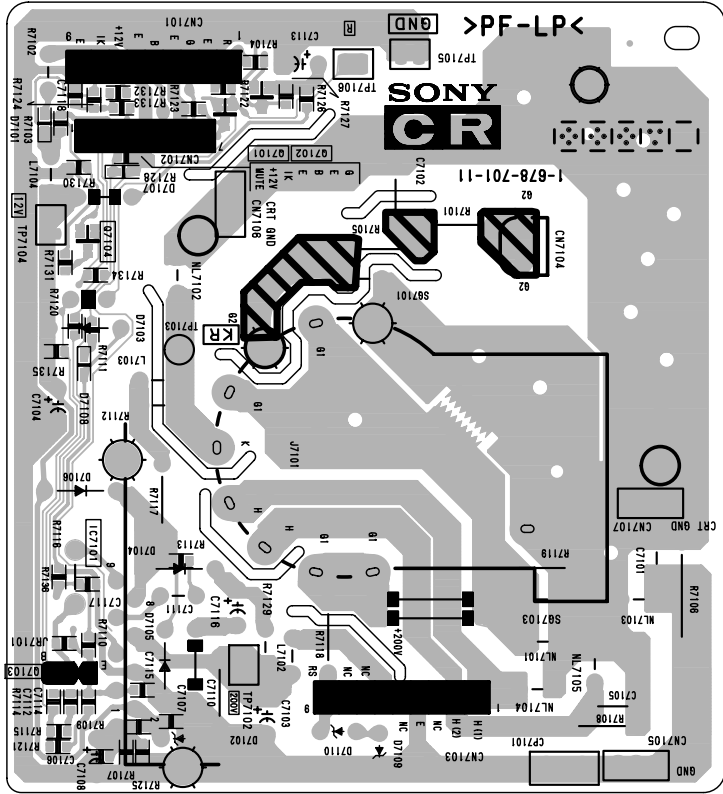
(16) Schematic Diagram of BD (2/2) Board



• BD BOARD SEMICONDUCTOR LOCATION

IC			Q2608	A-3	①	
			Q2610	B-1	①	
			Q2611	B-1	②	
			Q2612		B-1	①
			Q2613	B-1	②	
			Q2614	B-1	②	
			DIODE			
			(Component Side)	(Conductor Side)	*	
IC2601	B-1		D2601	A-3	③	
IC2602	A-1	B-1	D2602	A-3	③	
IC2603	B-1		D2603	A-3	③	
IC2604	A-2	B-2	D2604	A-3	③	
IC2605	A-4		D2605		B-1	③
IC2606	A-3		D2606	B-1	③	
IC2607	B-3		D2607		B-1	③
IC2608	B-1		D2608	B-1	③	
IC2609	A-2	B-2	D2609	B-1	③	
IC2610	B-2		D2610	B-1	③	
IC2611	B-3		D2611	B-1	③	
IC2612	A-3		D2612	B-1	③	
IC2613	A-3		D2613		A-1	③
IC2614	A-1	B-1	D2614		B-1	③
IC2615	A-3		D2615	B-1	③	
IC2616	B-1		D2616	B-1	③	
IC2617	B-4		D2617	B-1	③	
IC2618	B-3		D2618		B-1	③
IC2619	A-1	B-2	D2619	B-1	③	
IC2620	B-4		D2620		A-1	③
IC2621	A-4		D2621	B-1	③	
IC2622	B-1		D2622		B-1	③
IC2623	A-1	B-2	D2623	B-1	③	
IC2625	A-1	B-2	D2624	B-1	③	
IC2626	B-1					
IC2627	B-1					
TRANSISTOR						
			(Component Side)	(Conductor Side)	*	
Q2601	A-3		②			
Q2602	B-4		②			
Q2603	A-4		②			
Q2604	B-4		②			
Q2605	B-4		②			
Q2606	B-3		②			
Q2607	A-4	①				
			CRYSTAL			
			(Component Side)	(Conductor Side)		
			X2701	B-3		

- CR BOARD -

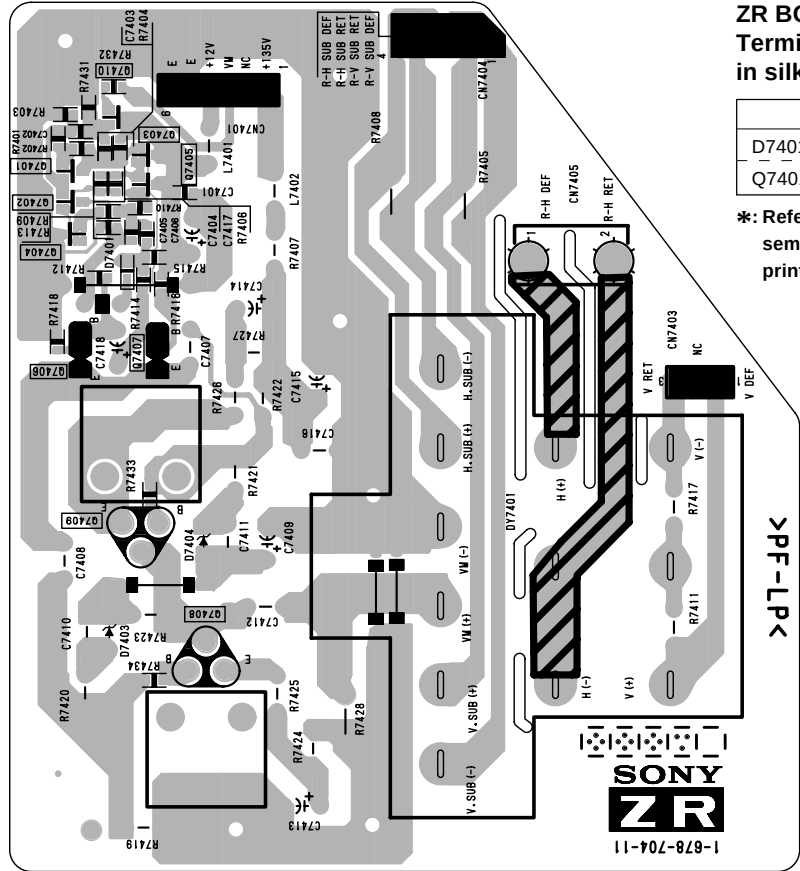


CR BOARD
Terminal name of semiconductors
in silk screen printed circuit (*)

Ref.	*
D7108	③
Q7101, 7104	①

※: Refer to Terminal name of
semiconductors in silk screen
printed circuit (see page 110)

- ZR BOARD -

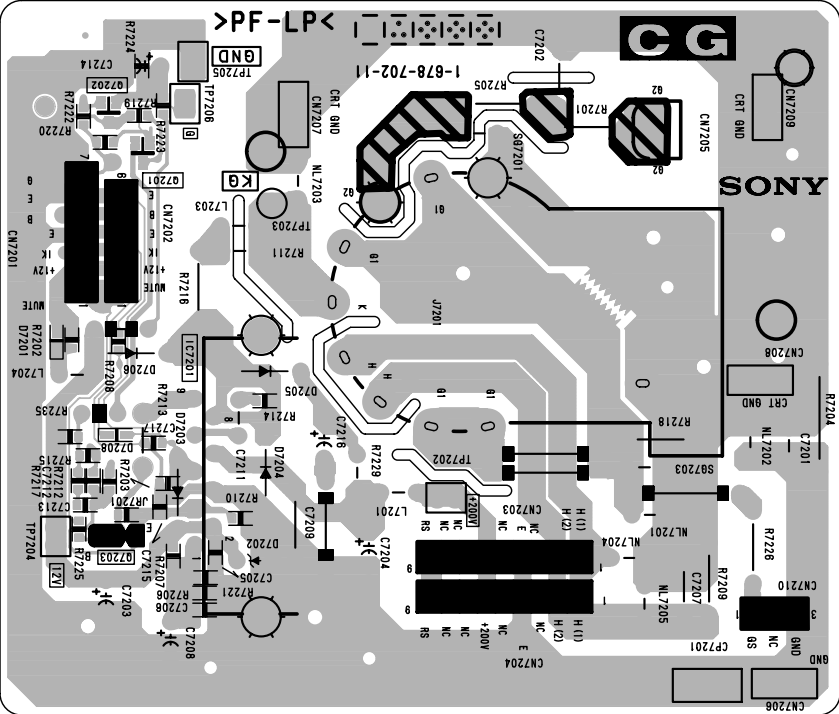


ZR BOARD
Terminal name of semiconductors
in silk screen printed circuit (*)

Ref.	*
D7401	③
Q7401 - 7405, 7410	①

※: Refer to Terminal name of
semiconductors in silk screen
printed circuit (see page 110)

- CG BOARD -



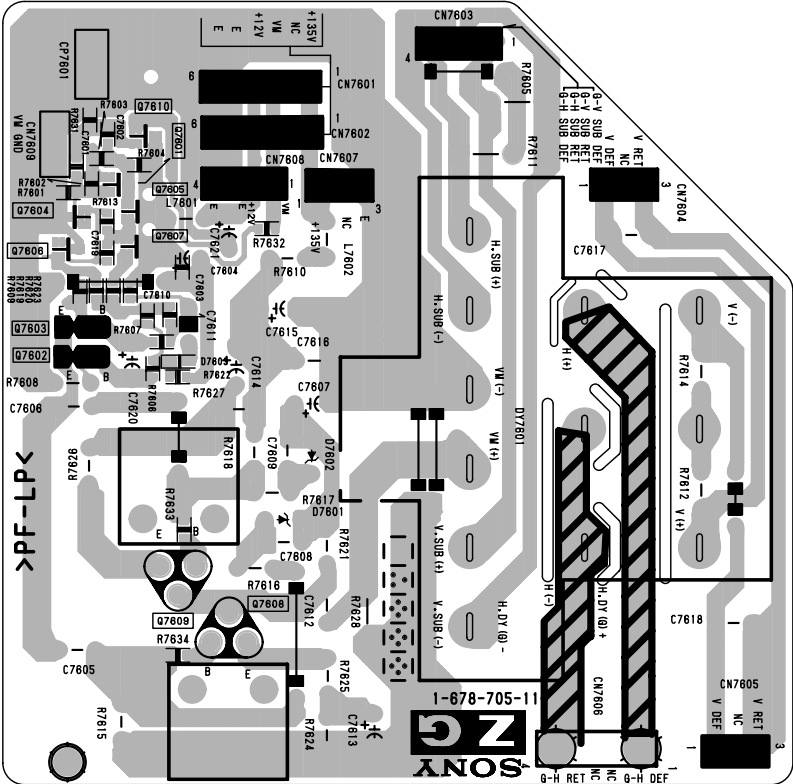
CG BOARD
Terminal name of semiconductors
in silk screen printed circuit (*)

Ref.	*
D7208	③
Q7201, 7202	①

※: Refer to Terminal name of
semiconductors in silk screen
printed circuit (see page 110)

NOTE:
The circuit indicated as left contains high voltage of over
600 Vp-p. Care must be paid to prevent an electric shock in
inspection or repairing.

- ZG BOARD -

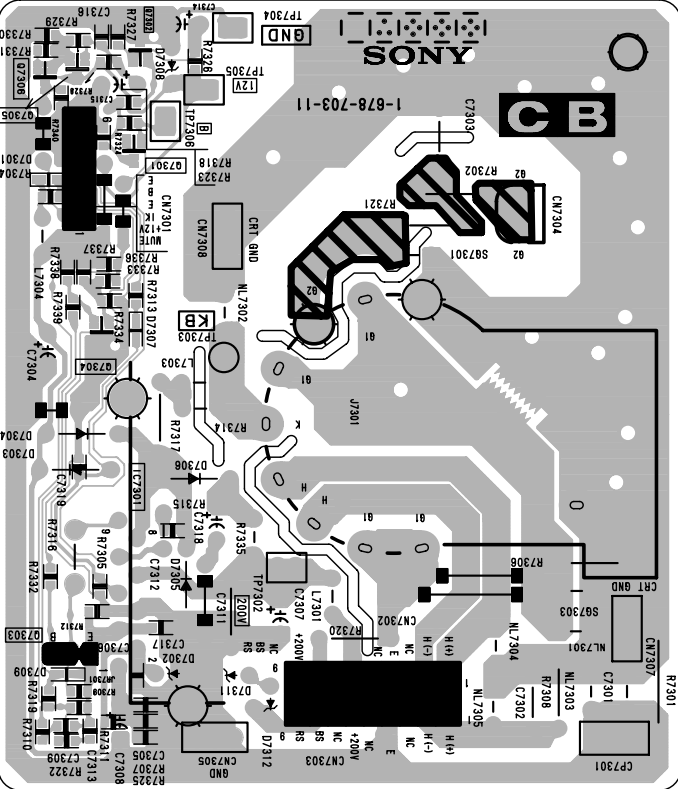


ZG BOARD
Terminal name of semiconductors
in silk screen printed circuit (*)

Ref.	*
D7603	③
Q7601, 7604 - 7607, Q7610	①

※: Refer to Terminal name of
semiconductors in silk screen
printed circuit (see page 110)

- CB BOARD -

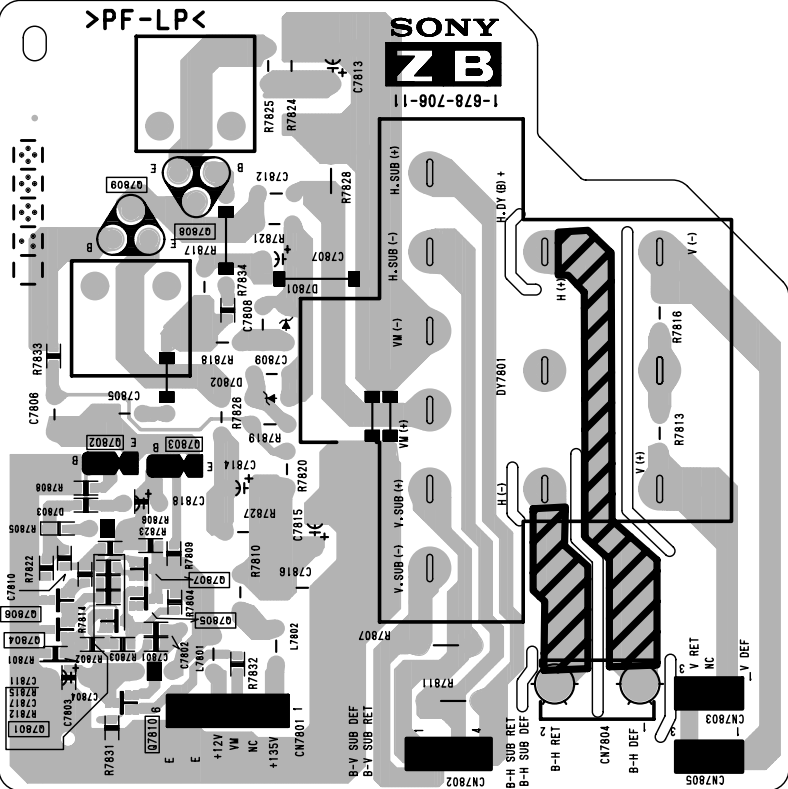


CB BOARD
Terminal name of semiconductors
in silk screen printed circuit (*)

Ref.	*
D7307, 7309	③
Q7301, 7302, 7305, 7306	①

※: Refer to Terminal name of
semiconductors in silk screen
printed circuit (see page 110)

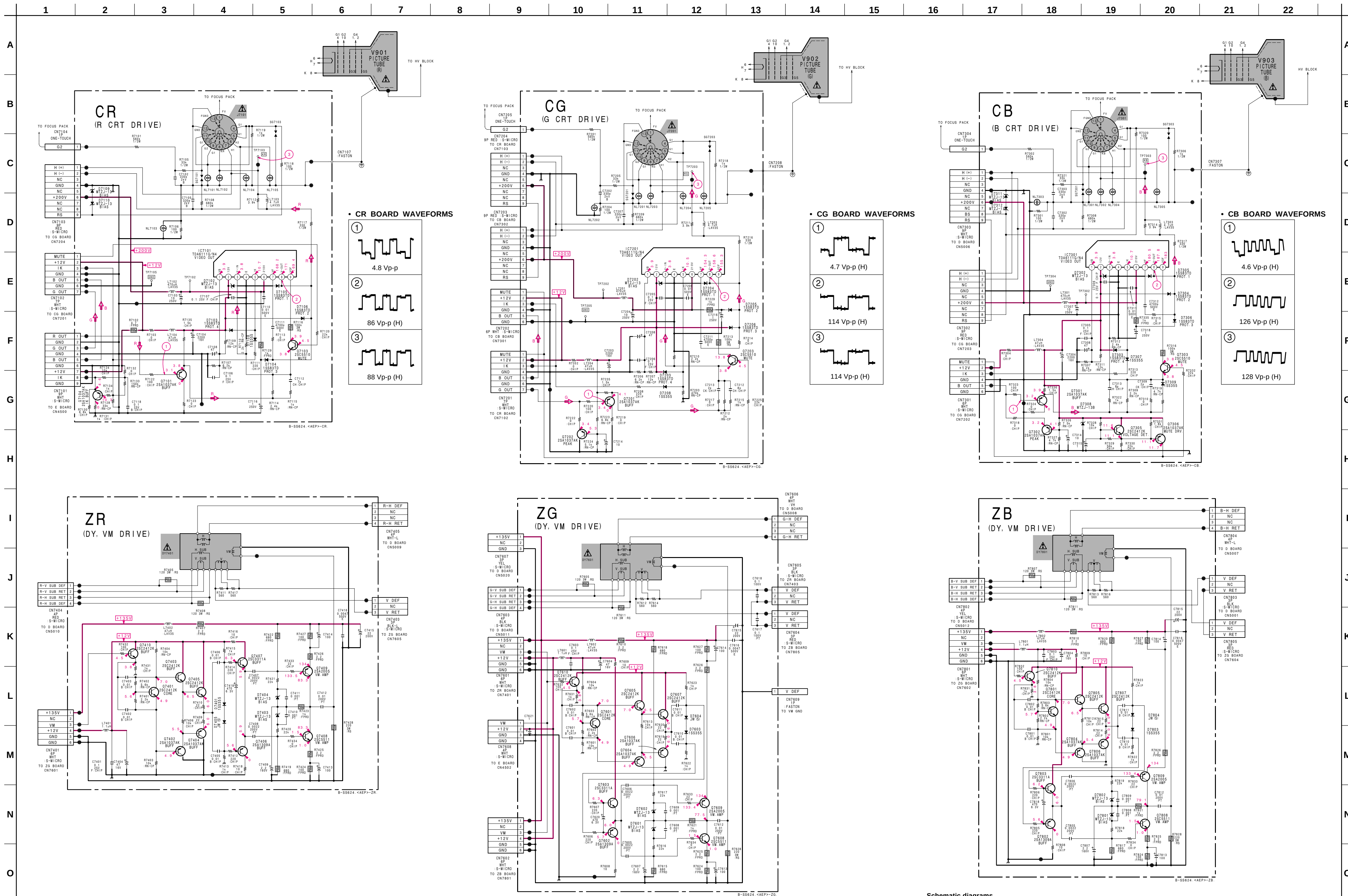
- ZB BOARD -



ZB BOARD
Terminal name of semiconductors
in silk screen printed circuit (*)

Ref.	*
D7803	③
Q7801, 7804 - 7807, Q7810	①

※: Refer to Terminal name of
semiconductors in silk screen
printed circuit (see page 110)



IC		DIODE		D6304	B-2	—
IC6002 B-3 IC6004 A-4 IC6007 C-3 IC6301 A-2 IC6302 D-3 IC6303 A-1 IC6304 D-2		D6010	D-3	Ⓢ	D6305	D-2
		D6015	C-4	—	D6306	D-2
		D6017	D-4	—	D6307	D-1
		D6018	A-5	—	D6308	C-2
		D6020	B-5	—	D6309	C-2
		D6021	A-5	—	D6310	C-3
		D6022	A-5	—	D6311	D-2
		D6023	A-5	—	D6312	D-1
		D6100	E-1	—	D6315	D-1
		D6101	D-4	—	D6316	D-1
TRANSISTOR		D6102	D-4	Ⓢ	D6317	D-1
		D6103	D-4	—	D6318	A-1
		D6104	E-4	—	D6319	D-1
		D6105	D-4	—	D6320	D-1
		D6106	E-4	—	D6323	D-3
		D6107	D-4	—		
		D6108	D-4	—		
		D6300	C-2	—		
		D6301	C-2	—		
		D6302	A-1	—		
	D6303	A-2	—			
	D6304	D-2	—			

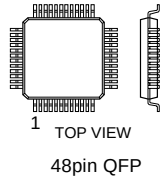
NOTE: The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

IC		Q6003	D-4	①	D6007	D-4	③	D6302	A-2	—
IC6000	D-4	Q6004	D-3	—	D6008	D-4	—	D6304	B-2	—
	IC6001	D-4	Q6005	D-5	—	D6009	D-5	②	D6305	D-2
	IC6002	B-3	Q6100	D-5	—	D6010	D-5	③	D6307	D-1
	IC6003	C-3	Q6102	E-3	①	D6011	D-4	④	D6308	C-1
	IC6004	A-4	Q6300	D-2	②	D6015	B-5	—	D6309	B-2
	IC6005	D-3	Q6301	D-1	①	D6017	D-3	—	D6310	C-2
	IC6006	D-2	Q6302	D-1	①	D6019	A-4	—	D6312	C-1
	IC6007	C-3	Q6303	A-1	—	D6021	A-5	—	D6315	C-1
	IC6301	A-2	DIODE			D6022	A-5	—	D6316	D-1
	IC6302	D-2				D6023	A-5	—	D6317	D-1
IC6303	A-1	*			D6024	D-4	①	D6318	A-1	
					D6025	D-4	②	D6319	D-1	
TRANSISTOR		D6001	C-4	—	D6100	E-4	—	D6320	D-1	
		D6002	D-4	③	D6101	C-4	—	D6323	D-3	
		D6003	D-4	③	D6102	D-4	③			
		D6004	D-4	③	D6103	D-3	③			
Q6000	D-4	D6005	D-4	③	D6105	D-3	—			
	Q6002	D-4	D6006	D-5	③	D6108	D-3	—		
		D-4	①	D6007	D-5	③	D6300	C-2	—	
					D6301	C-2	—			

7-5. SEMICONDUCTORS

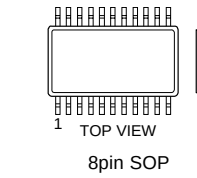
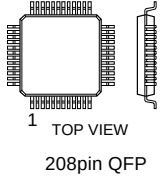
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LM339NS
MC74HC74AFEL
NJM2058M-TE2
SN74HC32ANS
SN74HC32ANSR
SN74HC74ANS
SN74HC74ANSR
TLC2932IPW
TLC2932IPW-E20
TLC2933IPWR
μPC339G2-T2

CXA3266Q-T6
CXD2064Q-T6
CXD2309Q-T6

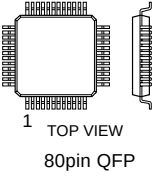


LM358D
LM358DR
M24C04-MN6T
M24C04-WMN6T
M24C08-MN6T(A)
M24C32-MN6T
TC7W02F
TC7W02F(TE12R)
TC7W04F
TC7W04F(TE12R)
TC7W08F
TC7W08F(TE12R)
TC7W32F
TC7W32F(TE12R)
TC7W66FU(TE12R)
TDA2822D013TR
μPC4570G2
μPC4570G2-E2

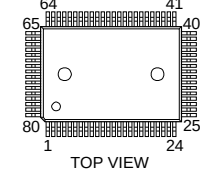
CXD2090Q



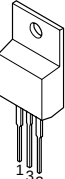
CM0006CF



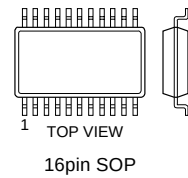
CXD2303AQ
CXD2303AQ-TL



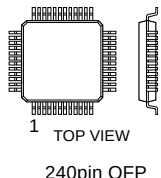
LM7912CT



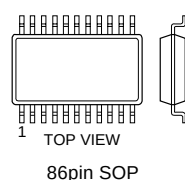
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MC74HC4538AF
MC74HC4538AFEL
PCM56P
PCM56P-L



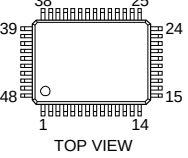
CXD9509Q



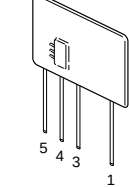
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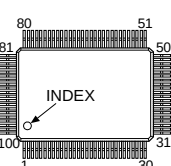
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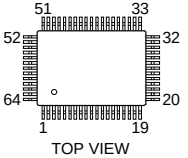
DM-58



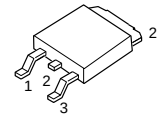
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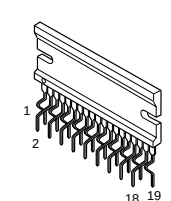
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CXA2100AQ-TL
CXP750096-025Q-TL
CXP86324-028Q



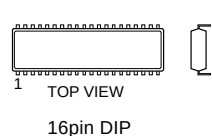
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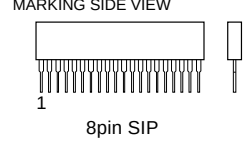
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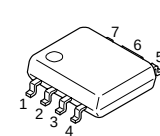
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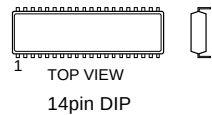
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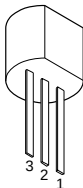
MM1476AF(TP)



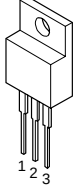
NJM2058D
μPC339C



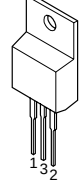
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TA78L005AP-TPE6



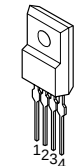
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NJM78M05FA
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PQ09RF2



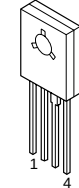
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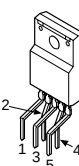
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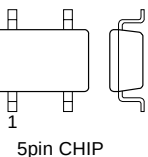
PQ30RV21



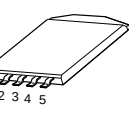
PQ5EV3



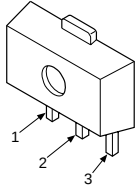
PST9120NL
PST9145NL
TC7SET04F(TE85R)
TC7SET08FU(TE85)
TC7SET08FU(TE85R)



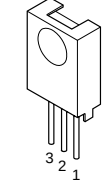
PST9143NL



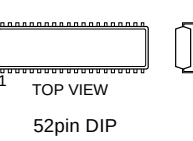
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S-80743AL-A7-T1



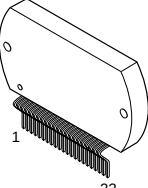
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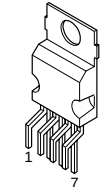
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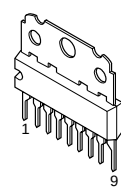
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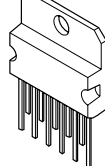
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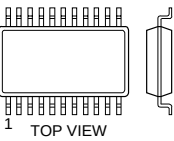
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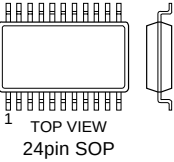
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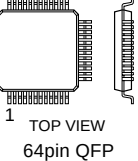
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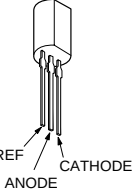
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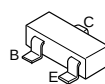
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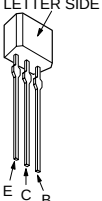
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TL431CLP-Z20
μPC1093J-1-T



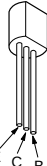
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DTC144EKA-T146
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2SA1037AK-T146-R
2SA1037K-T-146-R
2SA1162-G
2SB709A-QRS-TX
2SC1623-L5L6
2SC2412K-T-146-QR
2SC2412K-T-146-R
2SC2412K-T-146-S
2SD2114K
2SD2114KT146
2SD601A-Q
2SD601A-QRS-TX



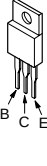
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2SA1309A-QRSTA
2SA933AS-QT
2SA933AS-RT
2SC3311A-QRSTA



2SA1208
2SA1208-T
2SC2551-O
2SC2551O-TPE2



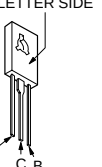
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2SC5022-02
2SC5511



2SB733-34
2SB734-34
2SB734-T-2
2SB734-T-4



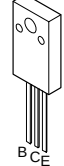
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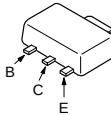
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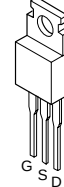
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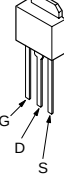
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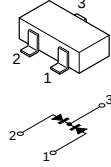
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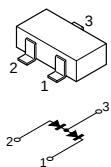
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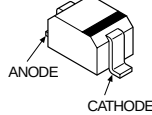
DAN202K
DAN202K-T-146



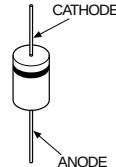
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DA204K-T-146



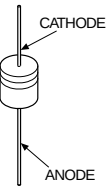
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DTZ24B
DTZ4.7C
DTZ5.1B
DTZ9.1
MA111-(K8).SO
MA111-TX
MA113-(TX)
RD12SB2
UDZ-TE-17-12B
UDZ-TE-17-15B
UDZ-TE-17-2.4B
UDZ-TE-17-24B
UDZ-TE-17-3.9B
UDZ-TE-17-4.7B
UDZ-TE-17-5.1B
UDZ-TE-17-6.2B
UDZ-TE-17-6.8B
UDZ-TE-17-8.2B
UDZ-TE-17-9.1B
1SS355TE-17



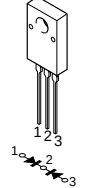
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D1NS6
D1NS6-TA2
EGP20G
EL1Z
EL1Z-V1
ERA22-08
ERA22-08TP3
GP08D
GP08DL-6563
GP08DPKG23
RGP02-20EL-6394
RGP10GPKG23
RGP15GPKG23
UF4005PKG23
1SS83
1SS83TD



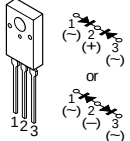
D1N20R
D1N20R-TA2
D1NL40-TA2
D1NS4
MTZJ-13
MTZJ-13B
MTZJ-7.5B
MTZJ-T-72-13B
MTZJ-T-77-10B
MTZJ-T-77-13
MTZJ-T-77-13B
MTZJ-T-77-15
MTZJ-T-77-2.2A
MTZJ-T-77-24
MTZJ-T-77-36B
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RD10ESB2
RD13ES-B2
RD5.1ESB2
1SS133T-77



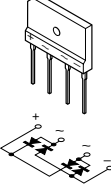
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D10SC4M-F
D10SC6M-4012



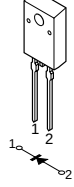
D10SC6MR



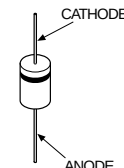
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D4SB60L
D4SBL20U
D4SBS4
D4SBS4-F
D6SB60L
RBA-406B
RBV-406B



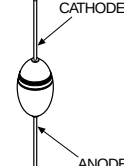
D5L60



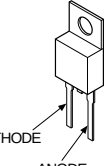
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MTZJ-T-72-18B



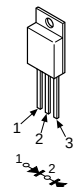
ERC38-06



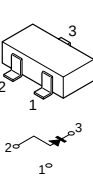
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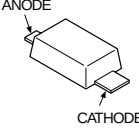
FMG-36S-LF024-104



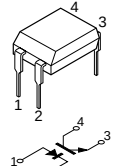
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MA3220M-TX



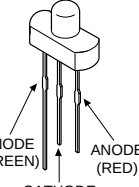
MA8039



ON3171-R

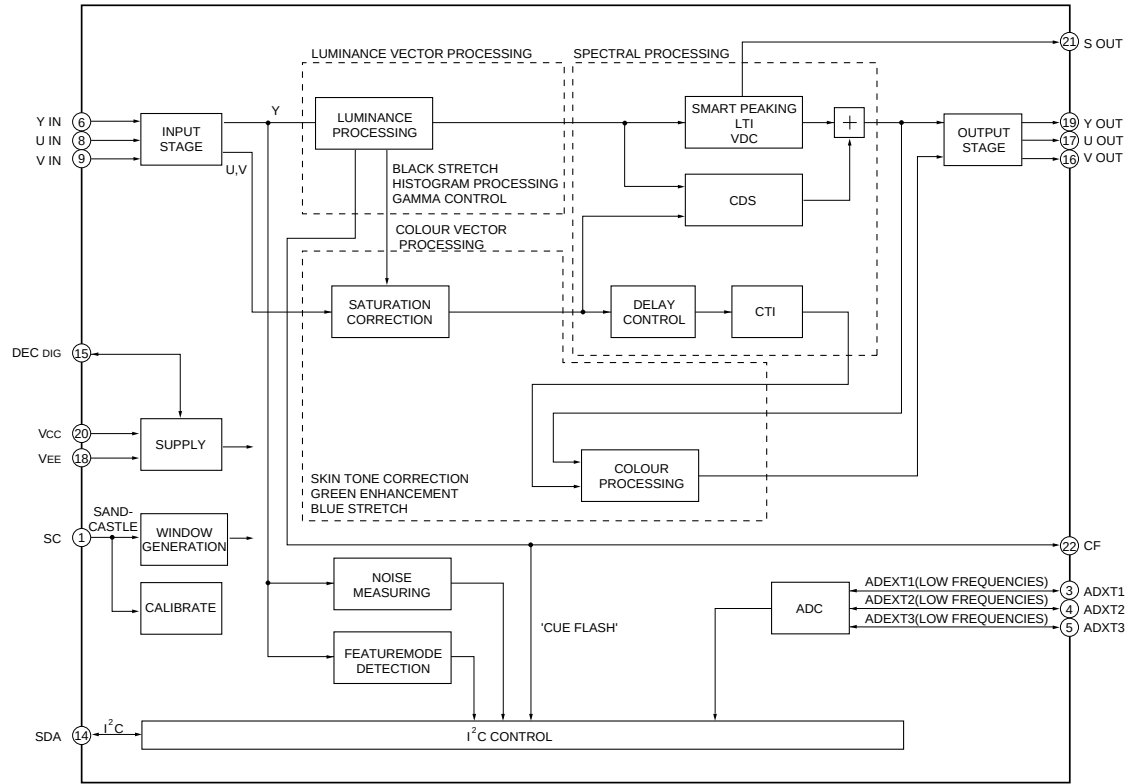


SPR-325MVW

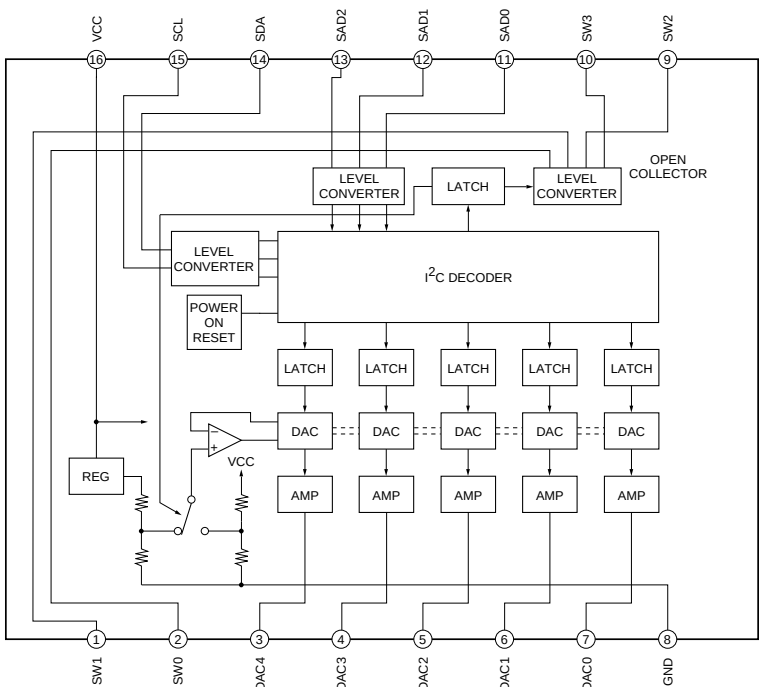


7-6. IC BLOCK DIAGRAMS

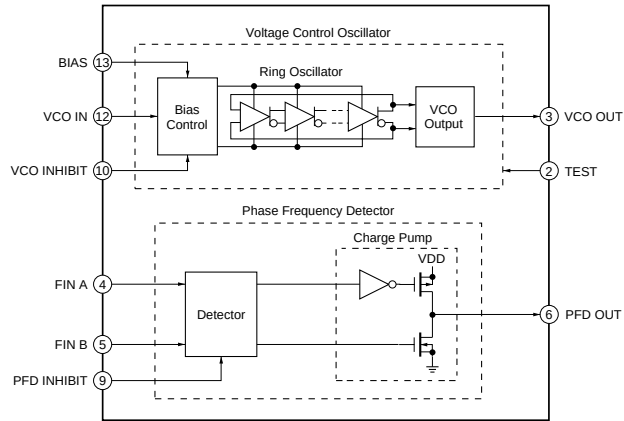
- J1 (2/2) BOARD IC8601
TDA9178T



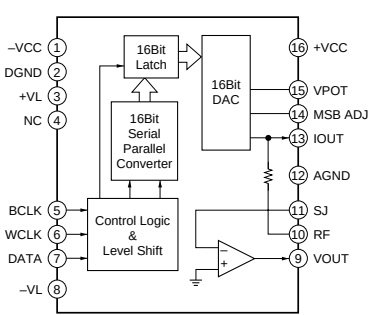
- B3 (2/5) BOARD IC604
CXA1875AM



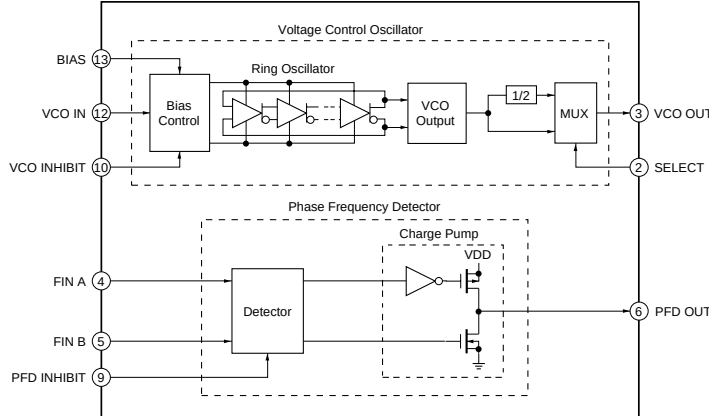
- B3 (1/5) BOARD IC504
TLC2933IPWR



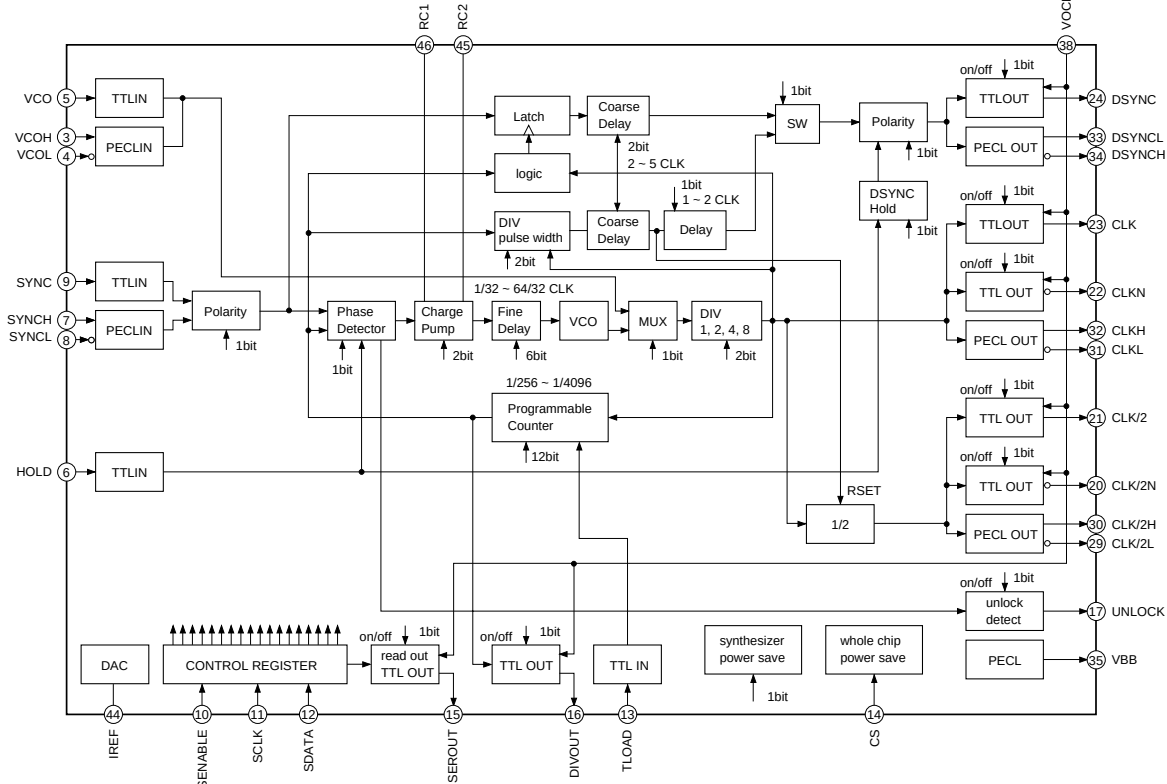
- BD (1/2) BOARD IC2602,
2604, 2609, 2614, 2623, 2625
PCM56P



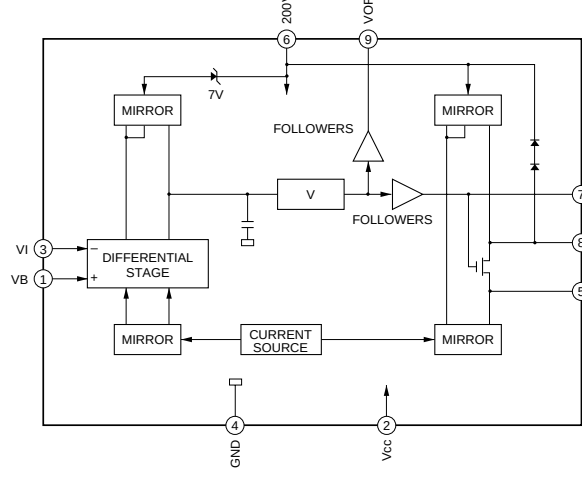
- B3 (2/5) BOARD IC603
• BD (1/2) BOARD IC2612
TLC2932IPW



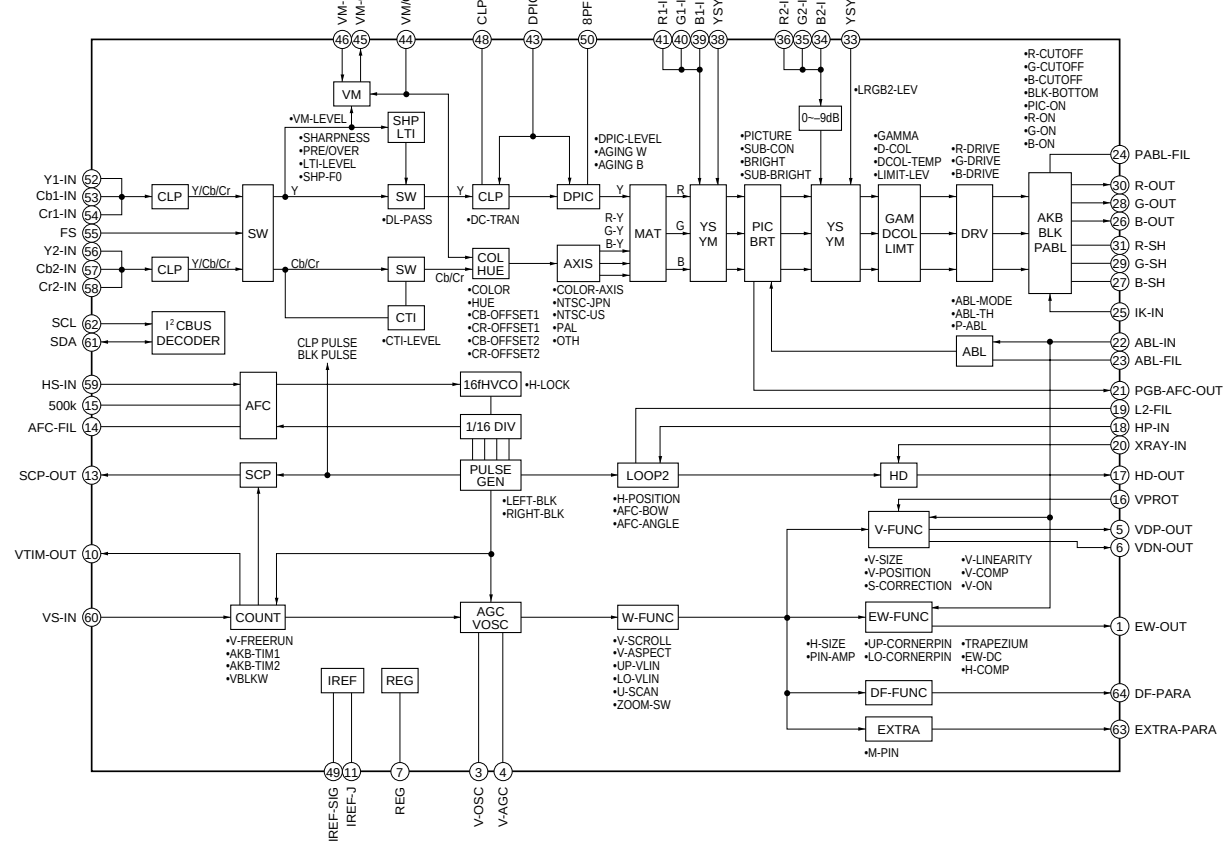
- B3 (5/5) BOARD IC303
CXA3266Q



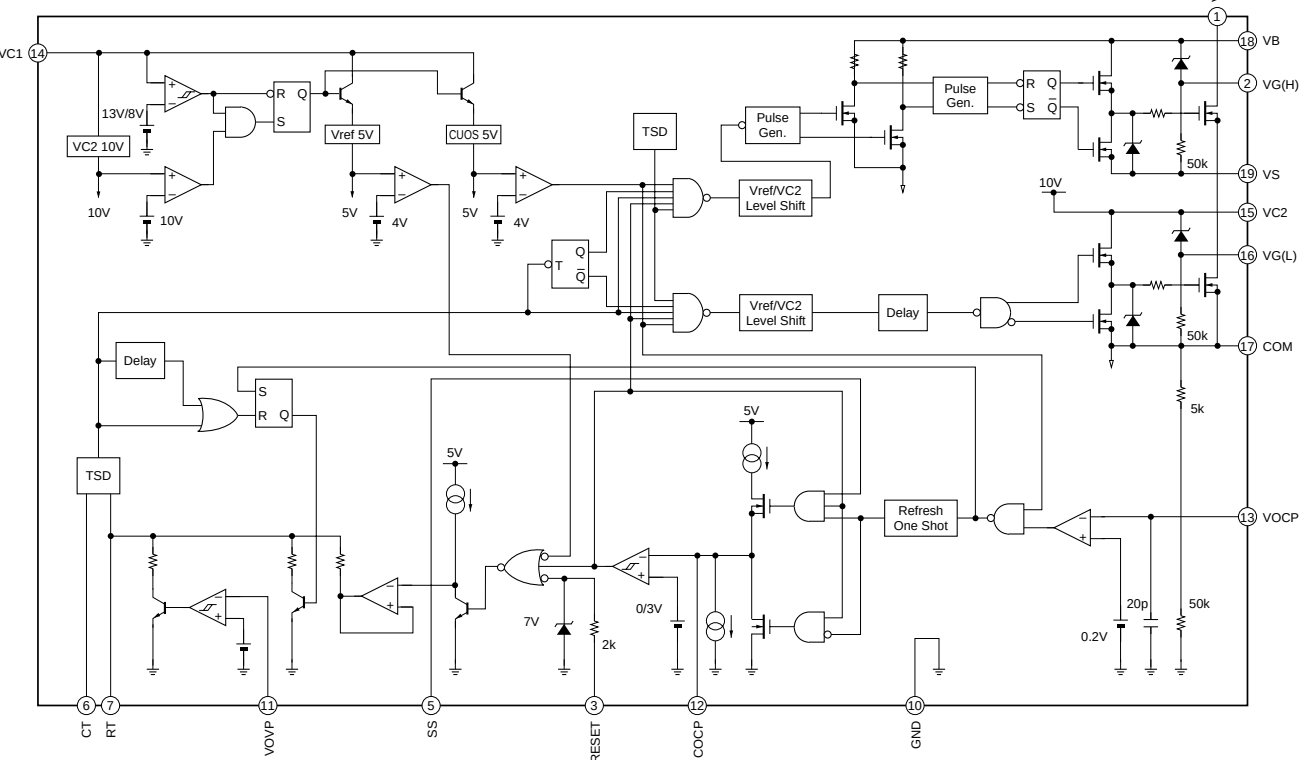
- CR BOARD IC7101
• CG BOARD IC7201
• CB BOARD IC7301
TDA6111Q



- E BOARD IC4301
CXA2100AQ



- G, G1 BOARD IC6004
MCR5152



SECTION 8

EXPLODED VIEWS

NOTE:

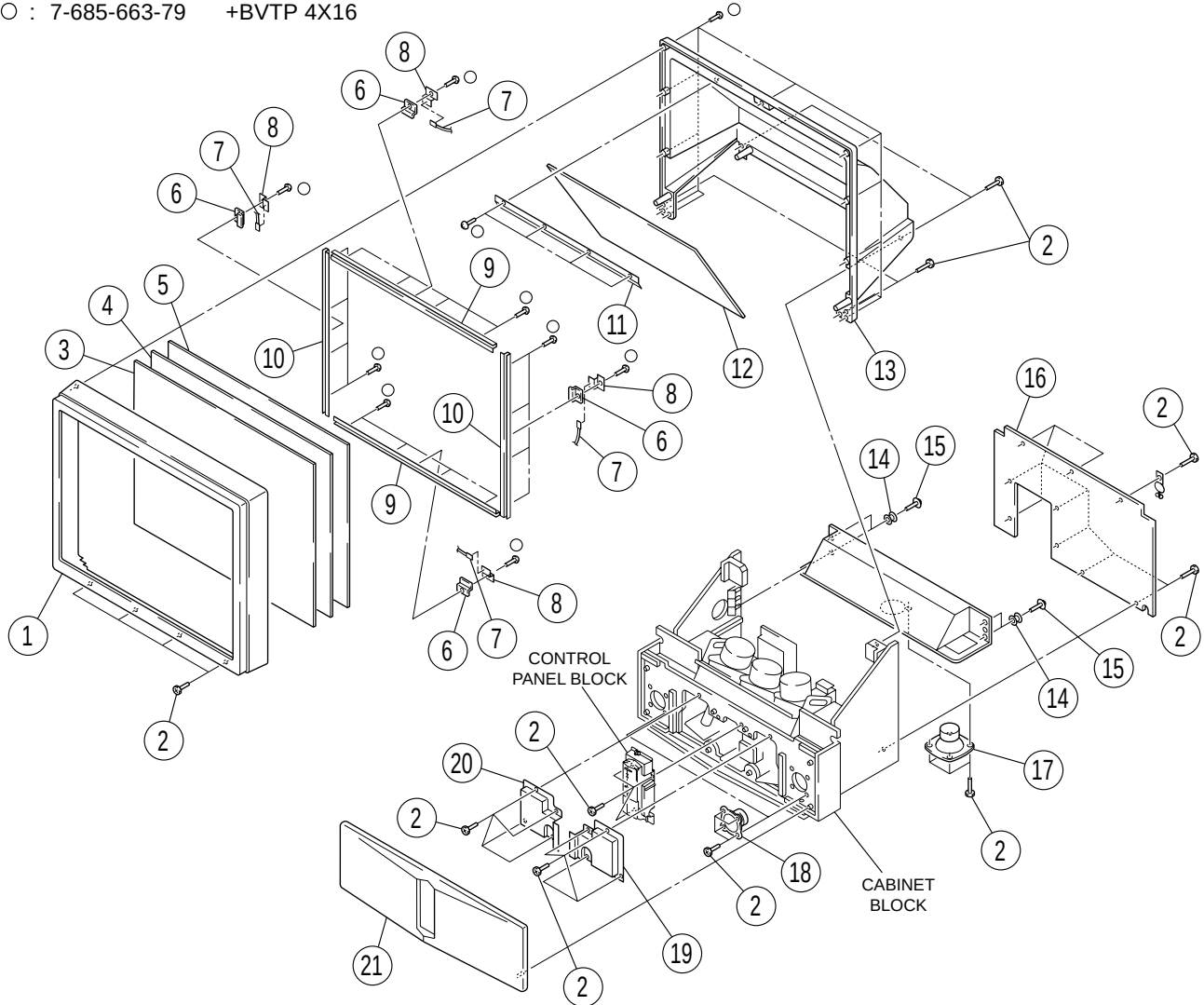
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark $\triangle$ are critical for safety. Replace only with part number specified.

8-1. SCREEN AND COVER BLOCK (KP-ES43)

○ : 7-685-663-79 +BVTP 4X16

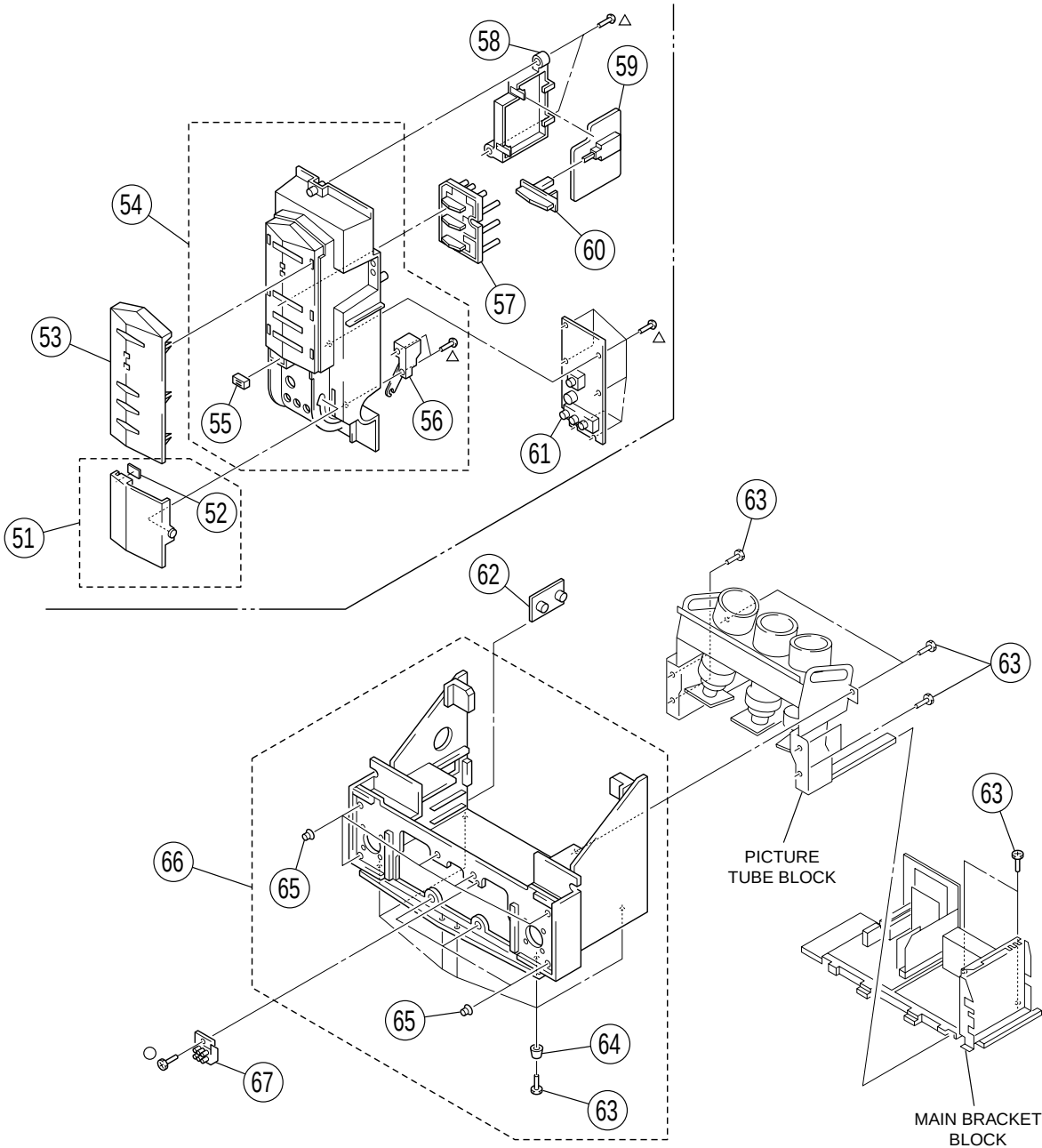


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4037-770-1	BEZEL (43) ASSY		12	4-076-587-01	MIRROR (43)	
2	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD		13	*4-076-588-01	COVER (43), MIRROR	
3	4-076-507-11	SCREEN (43AR), CONTRAST		14	4-077-433-01	BUSHING, RUBBER	
4	4-075-439-11	PLATE (43L), DIFFUSION		15	4-058-870-01	SCREW, (4X16) W (+) P TAPPING	
5	4-070-285-11	PLATE (43F), DIFFUSION		16	*4-076-578-01	BOARD (43), REAR	
6	*4-205-155-01	COVER, SENSOR		17	1-529-792-11	SPEAKER (12 CM)	
7	1-528-864-11	BATTERY, SOLAR		18	1-529-791-11	SPEAKER (10 CM)	
8	*4-066-132-01	HOLDER, SENSOR		19	*4-075-384-01	COVER (R), FRONT	
9	*4-076-698-21	HOLDER, SCREEN		20	*4-075-385-01	COVER (L), FRONT	
10	*4-076-698-31	HOLDER, SCREEN		21	X-4037-767-1	GRILLE ASSY, SPEAKER	
11	*4-066-129-01	HOLDER, MIRROR					

8-2. CONTROL PANEL AND CABINET BLOCK (KP-ES43)

- △ : 7-685-648-79 +BVTP 3X12
○ : 7-685-663-79 +BVTP 4X16

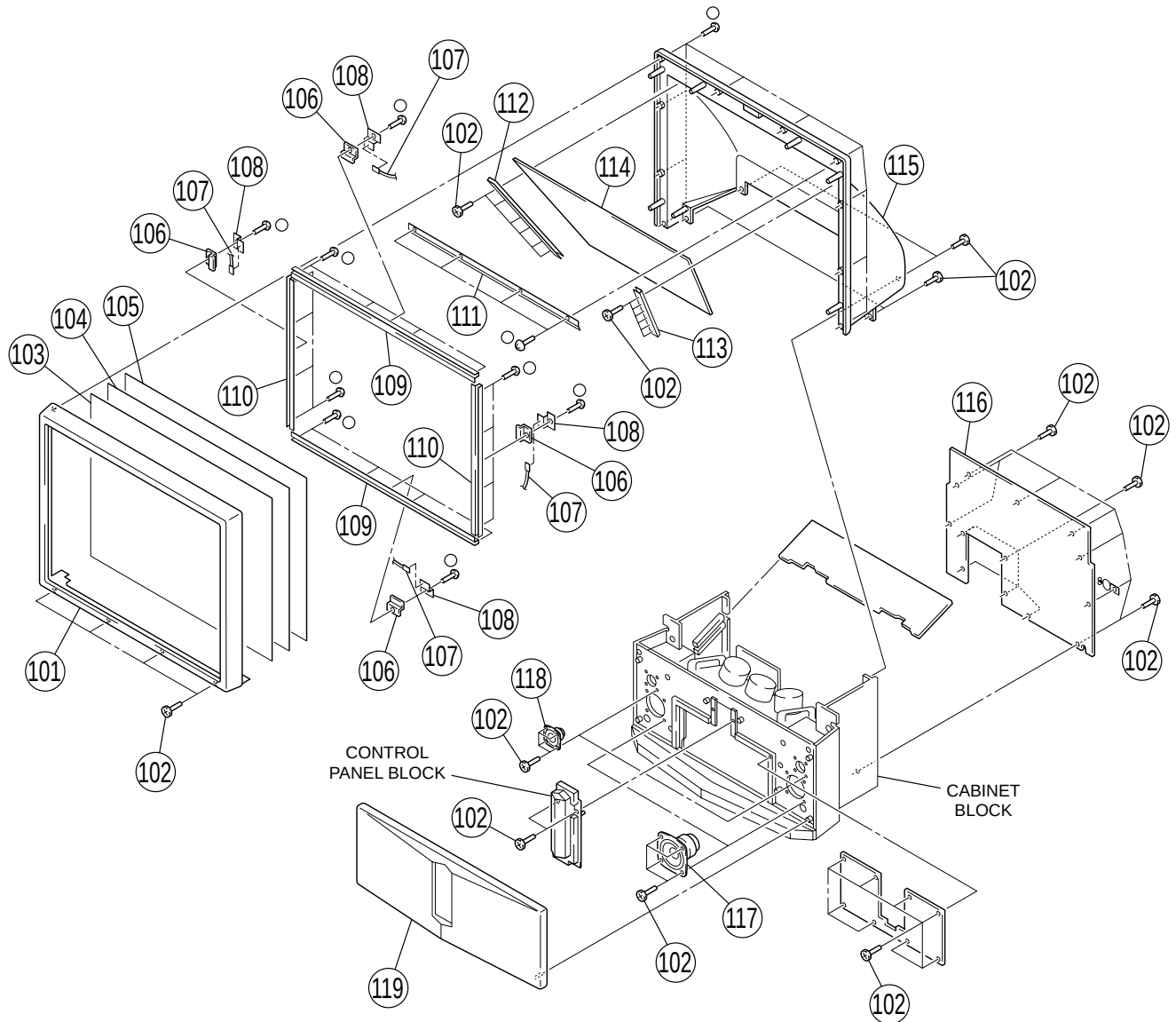
The components identified by shading and mark △ are critical for safety.
Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4037-769-1	DOOR ASSY	52	60	4-071-995-01	BUTTON, POWER	
52	4-076-581-01	PLATE, CATCHER		61	*A-1372-803-A	H1 BOARD, COMPLETE	
53	4-075-390-01	PANEL (F)		62	*1-761-348-11	PWB, MOUNTED (NET WORK)	
54	X-4037-768-1	PANEL ASSY, CONTROL	55, 56	63	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
55	3-736-779-01	MAGNET		64	4-076-577-01	FOOT	
56	4-075-383-01	DAMPER UNIT		65	4-063-421-02	LATCH (K)	
57	4-075-391-01	BUTTON, MALTI		66	*X-4037-766-1	CABINET (43) ASSY	63-65
58	*4-075-389-01	BRACKET, H1		67	△1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)	
59	*A-1372-804-A	H2 BOARD, COMPLETE				(FOCUS PACK)	

8-3. SCREEN AND COVER BLOCK (KP-ES48)

○ : 7-685-663-79 +BVTP 4X16

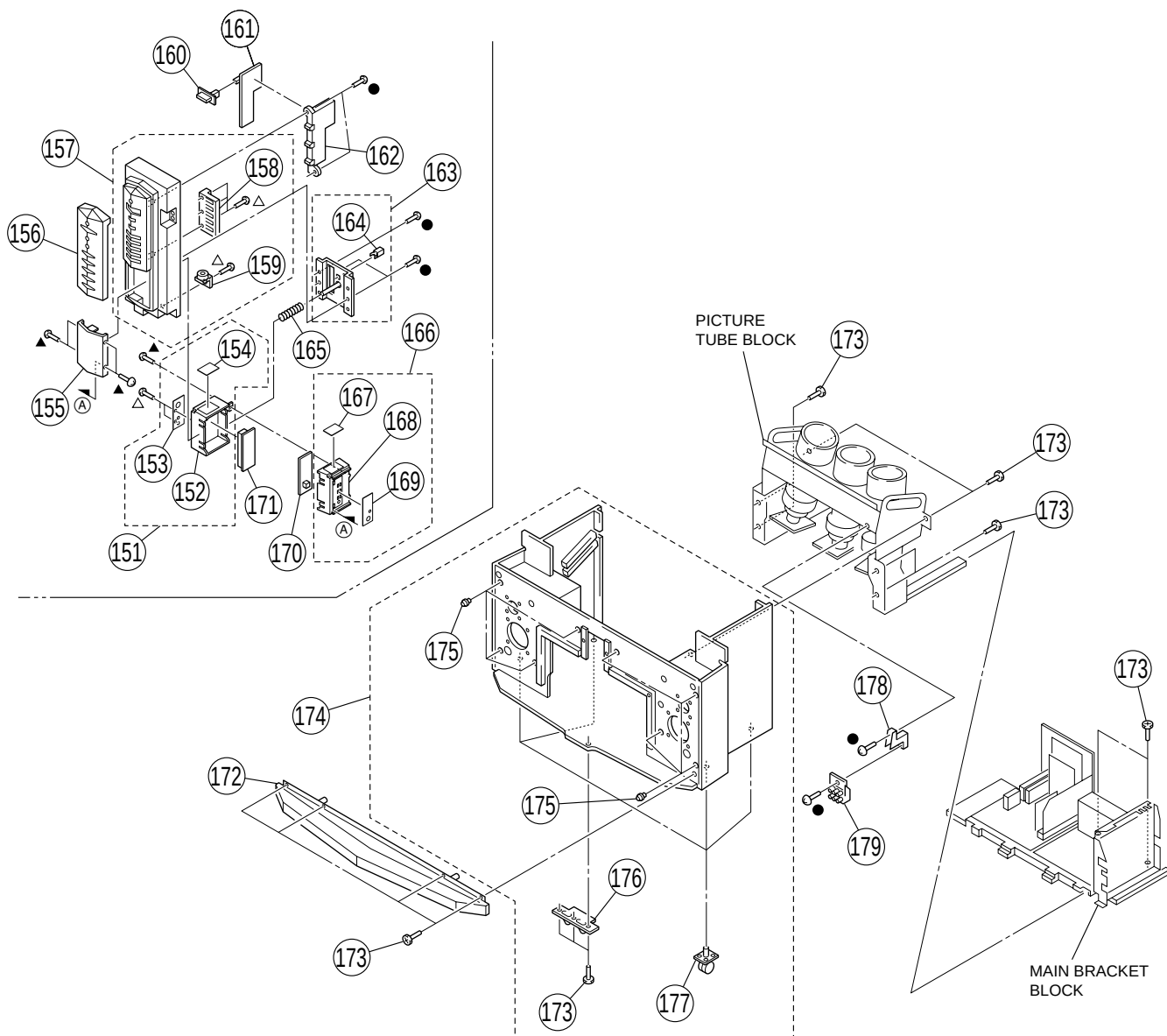


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	X-4037-794-1	BEZNET (48) ASSY		111	* 4-075-234-01	HOLDER (TOP), MIRROR	
102	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD		112	* 4-076-705-01	HOLDER (SL), MIRROR	
103	4-064-041-11	SCREEN (48), CONTRAST		113	* 4-076-706-01	HOLDER (SR), MIRROR	
104	4-075-440-11	PLATE (48L), DIFFUSION		114	4-076-704-01	MIRROR (48)	
105	4-058-455-12	PLATE (F), DIFFUSION		115	* 4-076-707-01	COVER (48), MIRROR	
106	* 4-205-155-01	COVER, SENSOR		116	* 4-076-696-01	BOARD, REAR	
107	1-528-864-11	BATTERY, SOLAR		117	1-529-643-11	SPEAKER (13 CM)	
108	* 4-066-132-01	HOLDER, SENSOR		118	1-529-403-11	SPEAKER (6.6 CM)	
109	* 4-076-698-01	HOLDER, SCREEN		119	X-4037-793-1	GRILLE ASSY, SPEAKER	
110	* 4-076-698-11	HOLDER, SCREEN					

8-4. CONTROL PANEL AND CABINET BLOCK (KP-ES48)

- ▲ : 7-685-534-19 +BTP 2.6X8
△ : 7-685-648-79 +BTP 3X12
● : 7-685-663-71 +BVTP 4X16

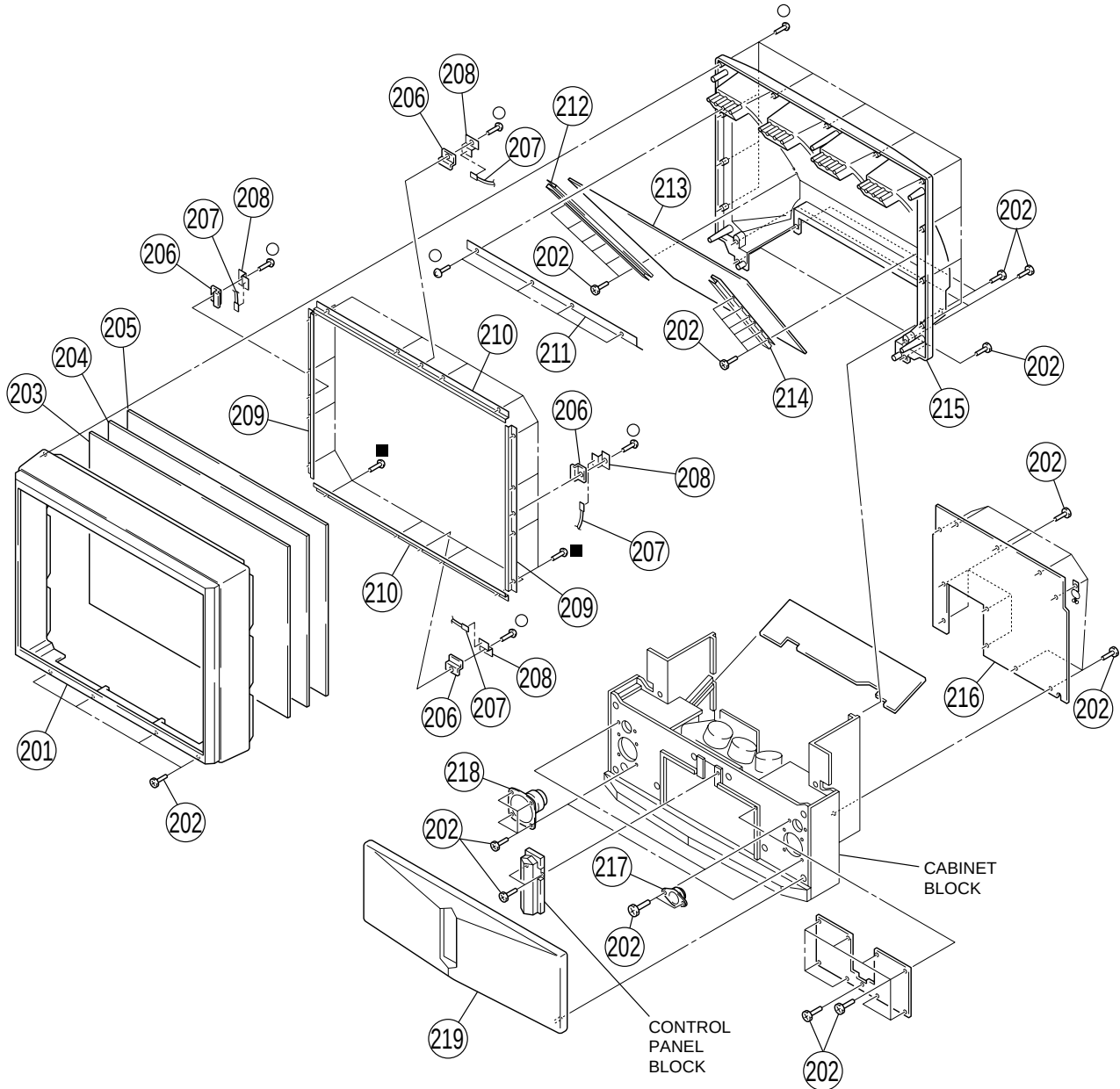
The components identified by shading and mark △ are critical for safety.
Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
151	X-4037-796-1	TRAY (L) ASSY	152-154	166	X-4037-795-1	TRAY (R) ASSY	167-169
152	4-072-001-03	TRAY (L)		167	4-076-701-01	LABEL (R), TOP	
153	4-071-990-11	LABEL (L), CONTROL		168	4-072-000-03	TRAY (R)	
154	4-076-702-01	LABEL (L), TOP		169	4-071-989-01	LABEL (R), CONTROL	
155	4-071-999-12	PANEL (T)		170	*A-1372-788-A	H2 BOARD, CONTROL	
156	4-072-007-21	PANEL (C)	158, 159	171	*A-1372-789-A	H3 BOARD, CONTROL	173, 175-177
157	X-4037-024-6	PANEL ASSY, CONTROL		172	*4-075-256-01	SKIRT, FRONT	
158	4-071-997-01	BUTTON, MULTI		173	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
159	4-919-393-01	DAMPER		174	*X-4037-792-1	CABINET (48) ASSY	
160	4-071-995-01	BUTTON, POWER		175	4-063-421-02	LATCH (K)	
161	*A-1372-787-A	H1 BOARD, COMPLETE	164	176	4-075-874-01	FOOT, PLASTIC	178, 179
162	*4-071-998-01	BRACKET (HA)		177	4-075-244-01	CASTER (30 DIA.)	
163	X-4037-221-2	HOLDER ASSY, TRAY		178	*4-054-825-01	BRACKET, FOCUS PACK	
164	4-047-464-01	CATCHER, PUSH		179	△1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)	
165	4-071-987-02	SPRING (T)				(FOCUS PACK)	

8-5. SCREEN AND COVER BLOCK (KP-ES53)

- : 7-685-661-79 +BVTP 4X12
○ : 7-685-663-79 +BVTP 4X16

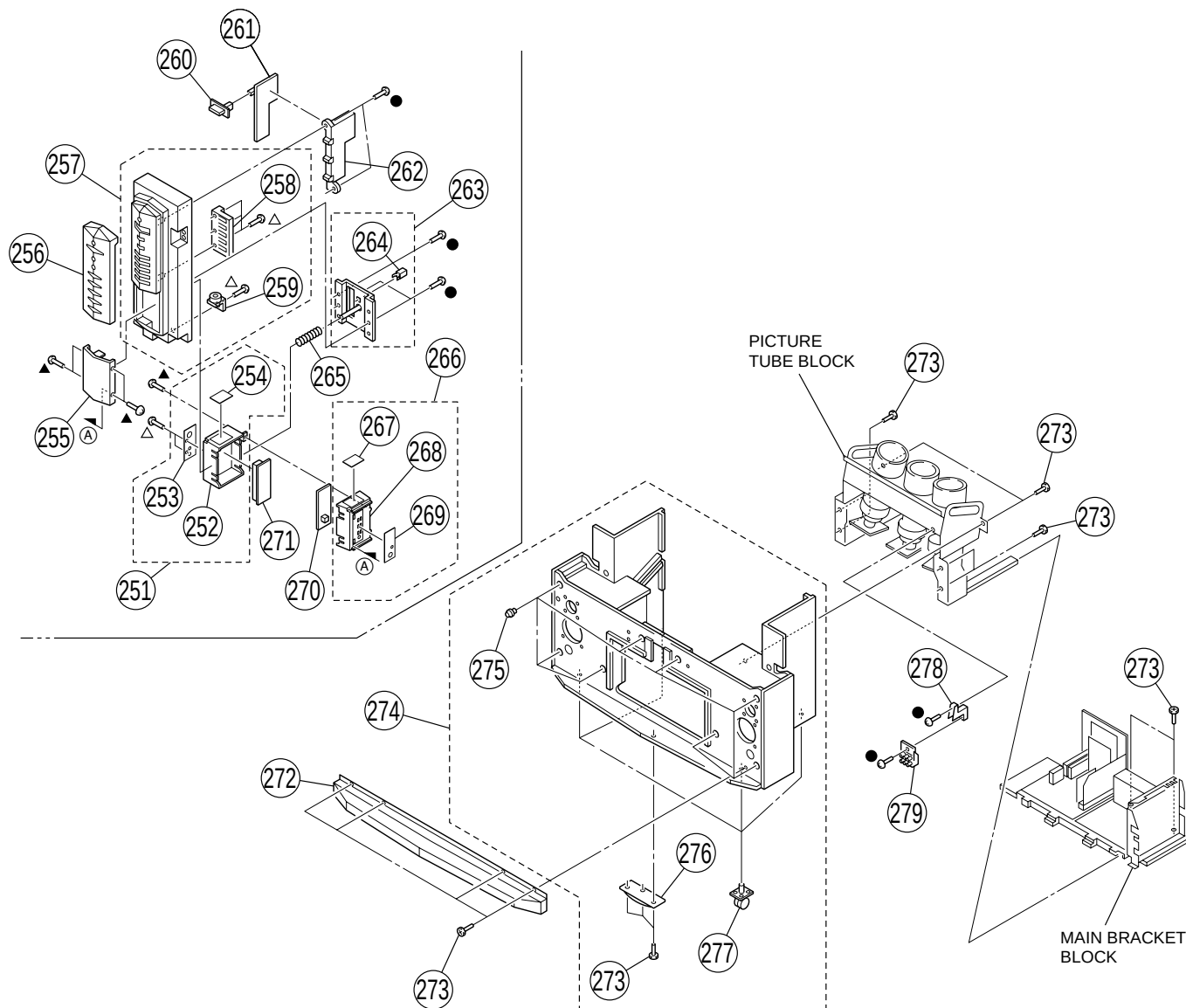


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
201	X-4037-799-1	BEZNET (53) ASSY		211	* 4-075-234-01	HOLDER (TOP), MIRROR	
202	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD		212	* 4-069-687-01	HOLDER (LS), MIRROR	
203	4-064-186-11	SCREEN (53), CONTRAST		213	4-070-344-01	MIRROR, REFLECTION	
204	4-070-525-11	PLATE (L), DIFFUSION		214	* 4-069-688-01	HOLDER (RS), MIRROR	
205	4-076-506-11	PLATE (53FV), DIFFUSION		215	* 4-069-694-01	COVER, MIRROR	
206	* 4-205-155-01	COVER, SENSOR		216	* 4-076-711-01	BOARD, REAR	
207	1-528-864-11	BATTERY, SOLAR		217	1-529-403-11	SPEAKER (6.6 CM)	
208	* 4-066-132-01	HOLDER, SENSOR		218	1-529-405-11	SPEAKER (13 CM)	
209	* 4-075-270-01	HOLDER (53) S, SCREEN		219	X-4037-798-1	GRILLE ASSY, SPEAKER	
210	* 4-075-269-01	HOLDER (53) L, SCREEN					

8-6. CONTROL PANEL AND CABINET BLOCK (KP-ES53)

- ▲ : 7-685-534-19 +BTP 2.6X8
△ : 7-685-648-79 +BTP 3X12
● : 7-685-663-71 +BVTP 4X16

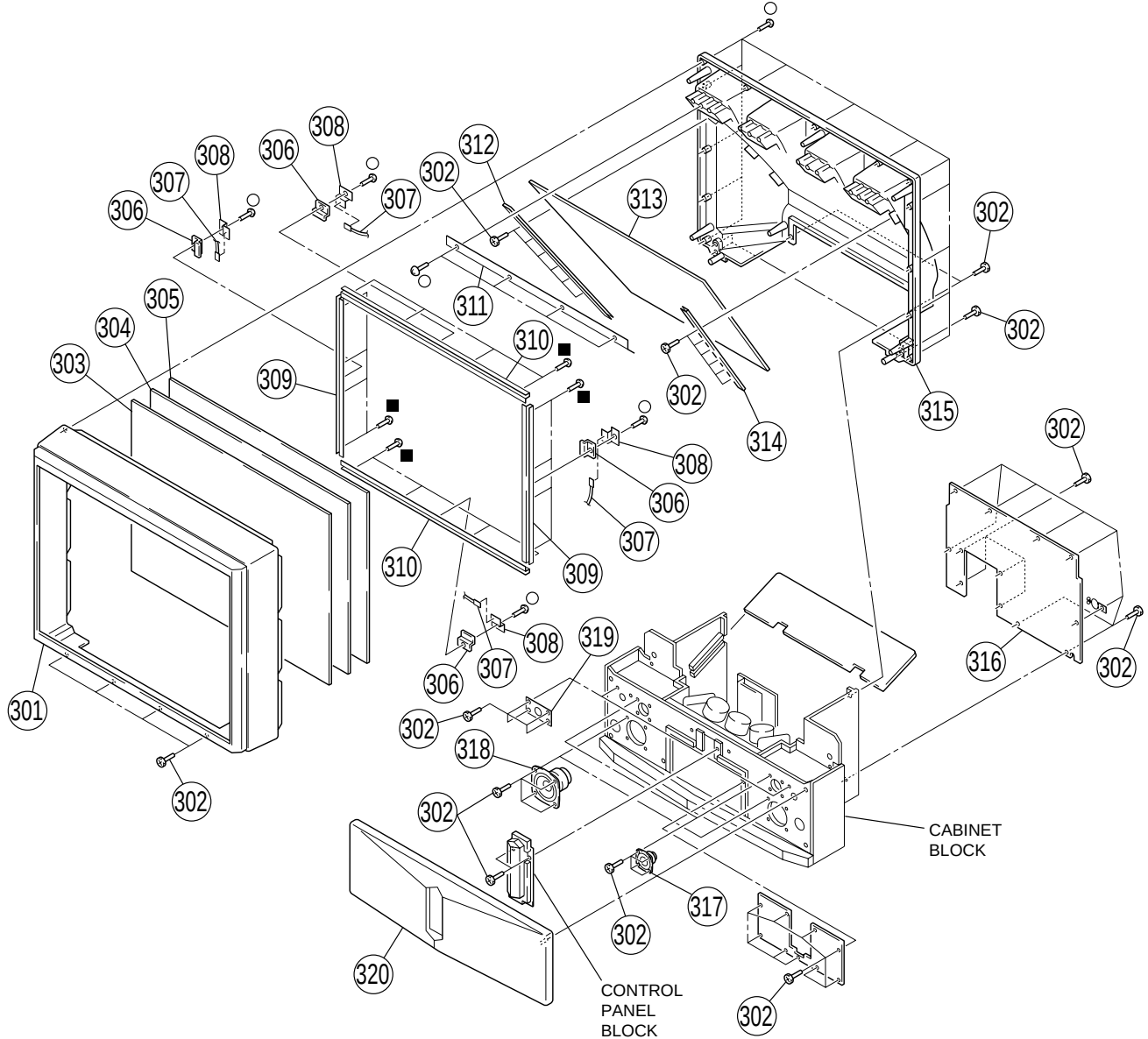
The components identified by shading and mark △ are critical for safety.
Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
251	X-4037-796-1	TRAY (L) ASSY	252-254	266	X-4037-795-1	TRAY (R) ASSY	267-269
252	4-072-001-03	TRAY (L)		267	4-076-701-01	LABEL (R), TOP	
253	4-071-990-11	LABEL (L), CONTROL		268	4-072-000-03	TRAY (R)	
254	4-076-702-01	LABEL (L), TOP		269	4-071-989-01	LABEL (R), CONTROL	
255	4-071-999-12	PANEL (T)		270	*A-1372-788-A	H2 BOARD, COMPLETE	
256	4-072-007-21	PANEL (C)	258, 259	271	*A-1372-789-A	H3 BOARD, COMPLETE	272-277
257	X-4037-024-6	PANEL ASSY, CONTROL		272	*4-074-349-01	SKIRT (53), FRONT	
258	4-071-997-01	BUTTON, MULTI		273	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
259	4-919-393-01	DAMPER		274	*X-4037-797-1	CABINET (53) ASSY, BOTTOM	
260	4-071-995-01	BUTTON, POWER		275	4-063-421-02	LATCH (K)	
261	*A-1372-787-A	H1 BOARD, COMPLETE	264	276	4-075-874-01	FOOT, PLASTIC	273, 275-277
262	*4-071-998-01	BRACKET (HA)		277	*4-075-244-01	CASTER (DIA. 30)	
263	X-4037-221-2	HOLDER ASSY, TRAY		278	*4-054-825-01	BRACKET, FOCUS PACK	
264	4-047-464-01	CATCHER, PUSH		279	△1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)	
265	4-071-987-02	SPRING (T)				(FOCUS PACK)	

8-7. SCREEN AND COVER BLOCK (KP-ES61)

- : 7-685-661-79 +BVTP 4X12
○ : 7-685-663-79 +BVTP 4X16

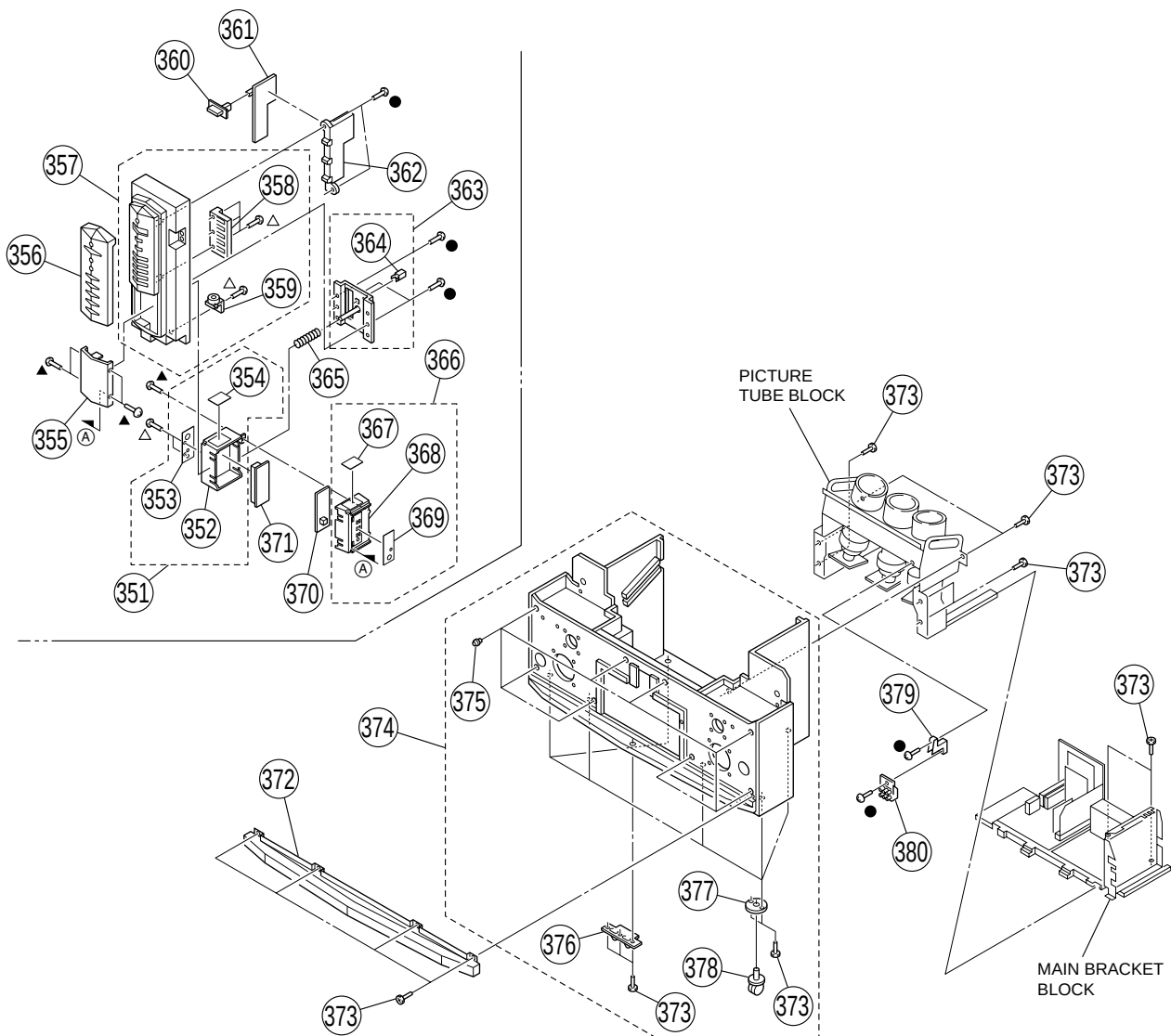


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
301	X-4037-791-1	BEZNET (61) ASSY		311	* 4-070-345-01	HOLDER (TOP), MIRROR	
302	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD		312	* 4-069-689-01	HOLDER (L), MIRROR	
303	4-071-950-11	SCREEN (61), CONTRAST		313	4-070-922-01	MIRROR, REFLECTION	
304	4-070-283-11	PLATE (L), DIFFUSION		314	* 4-069-690-01	HOLDER (R), MIRROR	
305	4-066-082-11	PLATE (F), DIFFUSION		315	* 4-069-695-01	COVER, MIRROR	
306	* 4-205-155-01	COVER, SENSOR		316	* 4-076-692-01	BOARD, REAR	
307	1-528-864-11	BATTERY, SOLAR		317	1-529-758-11	SPEAKER (8 CM)	
308	* 4-066-132-01	HOLHDER, SENSOR		318	1-529-759-11	SPEAKER (16 CM)	
309	4-072-006-01	HOLDER (V61), SCREEN		319	1-529-757-11	SPEAKER (2.7 CM)	
310	4-072-005-01	HOLDER (H61), SCREEN		320	X-4037-790-1	GRILLE (61) ASSY, SPEAKER	

8-8. CONTROL PANEL AND CABINET BLOCK (KP-ES61)

- ▲ : 7-685-534-19 +BTP 2.6X8
△ : 7-685-648-79 +BVTP 3X12
● : 7-685-663-71 +BVTP 4X16

The components identified by shading and mark △ are critical for safety.
Replace only with part number specified.

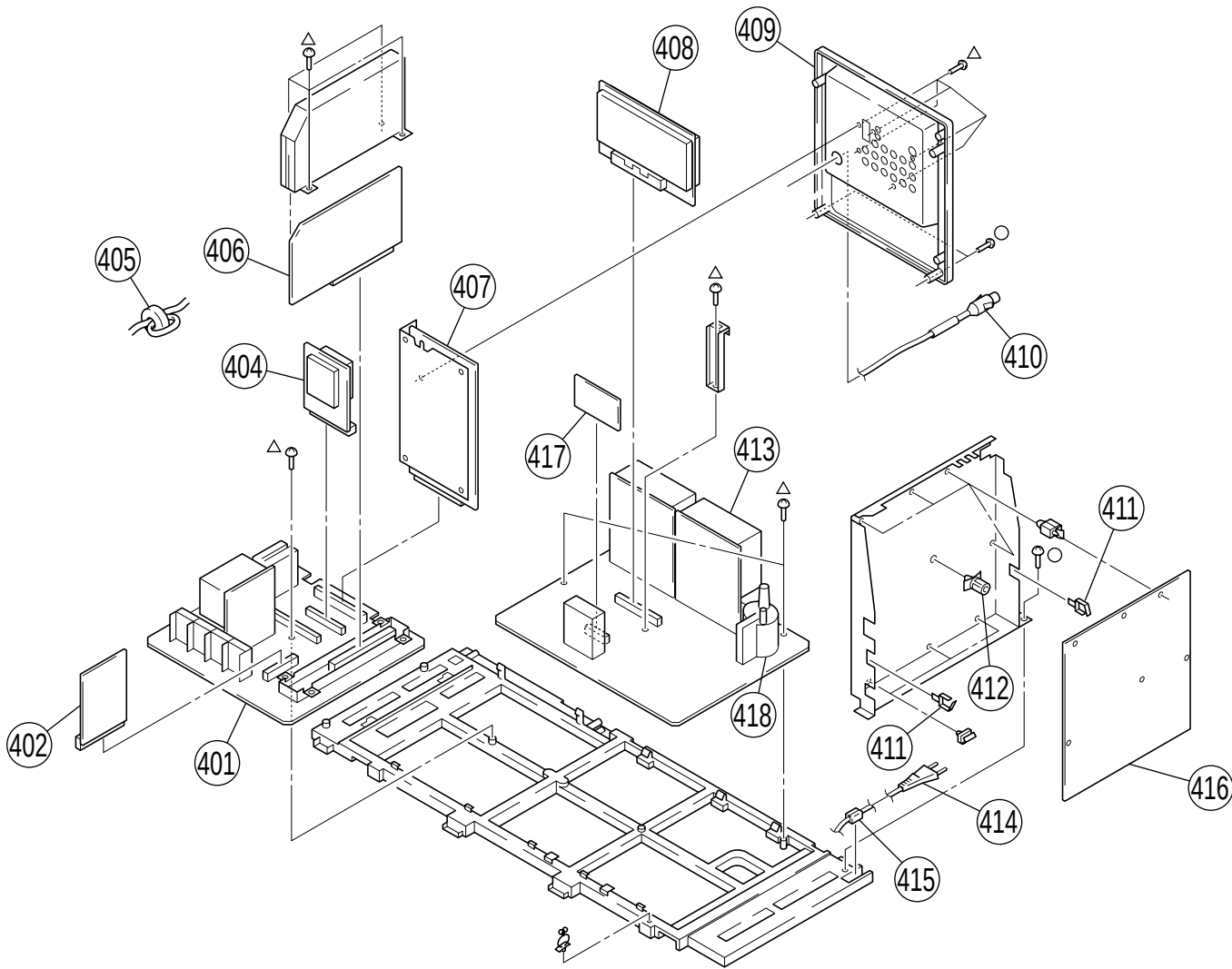


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
351	X-4037-796-1	TRAY (L) ASSY	352-354	367	4-076-701-01	LABEL (R), TOP	
352	4-072-001-03	TRAY (L)		368	4-072-000-03	TRAY (R)	
353	4-071-990-11	LABEL (L), CONTROL		369	4-071-989-01	LABEL (R), CONTROL	
354	4-076-702-01	LABEL (L), TOP		370	*A-1372-788-A	H2 BOARD, COMPLETE	
355	4-071-999-12	PANEL (T)		371	*A-1372-789-A	H3 BOARD, COMPLETE	
356	4-072-007-21	PANEL (C)		372	4-072-013-11	SKIRT (61), FRONT	
357	X-4037-024-6	PANEL ASSY, CONTROL	358, 359	373	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
358	4-071-997-01	BUTTON, MULTI		374	*X-4037-789-1	CABINET (61) ASSY	373, 375-378
359	4-919-393-01	DAMPER		375	4-063-421-02	LATCH (K)	
360	4-071-995-01	BUTTON, POWER		376	4-075-874-01	FOOT, PLASTIC	
361	*A-1372-787-A	H1 BOARD, COMPLETE		377	4-030-850-01	SOCKET, CASTER	
362	*4-071-998-01	BRACKET (HA)		378	4-039-546-01	CASTER	
363	X-4037-221-2	HOLDER ASSY, TRAY	364	379	*4-054-825-01	BRACKET, FOCUS PACK	
364	4-047-464-01	CATCHER, PUSH		380	△1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)	
365	4-071-987-02	SPRING (T)				(FOCUS PACK)	
366	X-4037-795-1	TRAY (R) ASSY	367-369				

8-9. MAIN BRACKET BLOCK

- △ : 7-685-648-79 +BVTP 3X12
○ : 7-685-663-79 +BVTP 4X16

The components identified by shading and mark △ are critical for safety.
Replace only with part number specified.

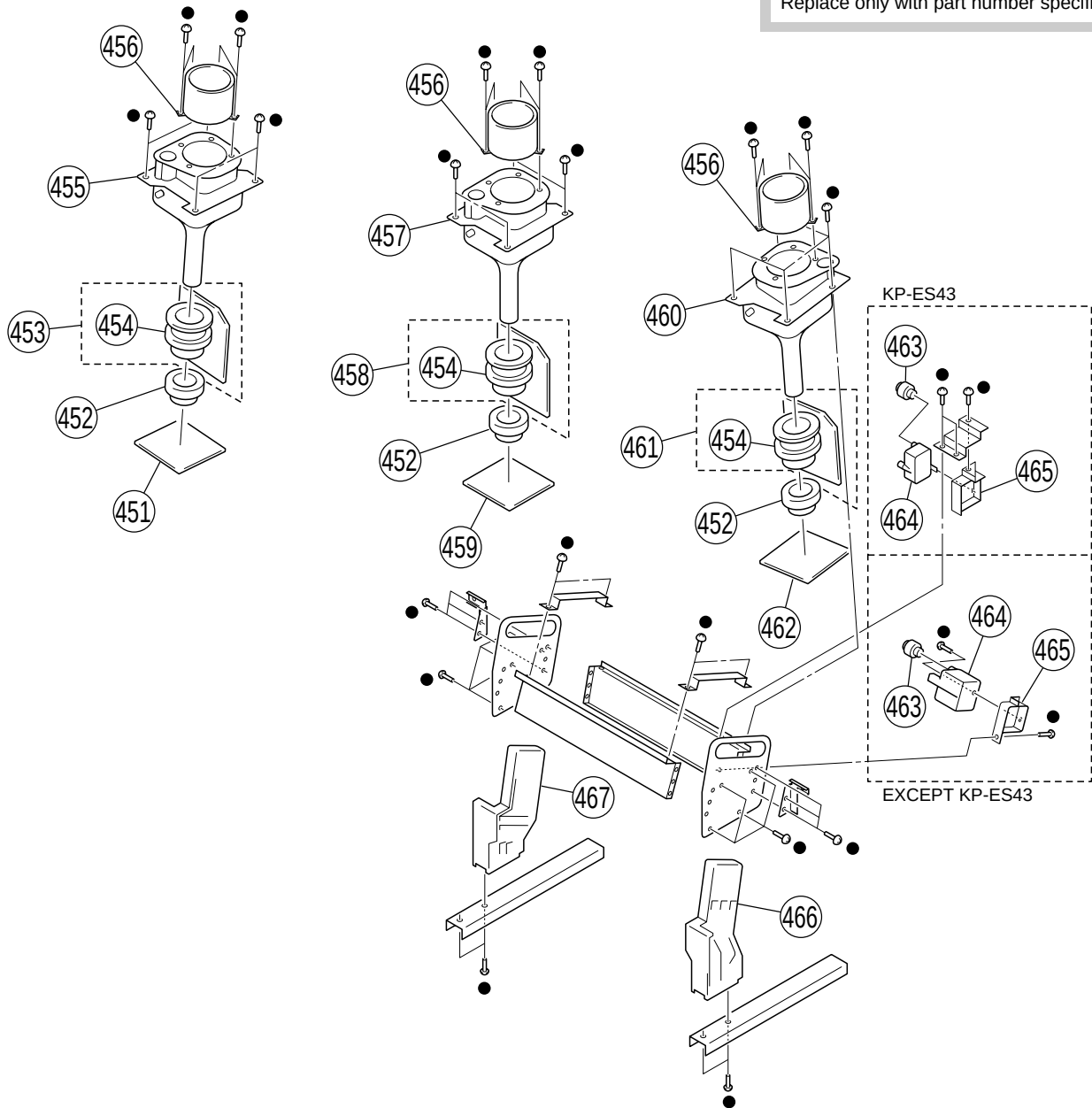


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
401	* A-1299-176-A	A1 BOARD, COMPLETE		414	△ 1-574-062-52	CORD, POWER (WITH CONNECTOR) (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
402	* A-1346-922-A	E BOARD, COMPLETE		414	△ 1-792-002-11	CORD, POWER (WITH FILTER) (ES43HK1, ES48HK1, ES53HK1, ES61HK1)	
404	* A-1306-588-A	M1 BOARD, COMPLETE		414	△ 1-792-035-11	CORD, POWER (WITH FILTER) (ES43SN1, ES48SN1, ES53SN1, ES61SN1)	
405	1-543-982-11	CORE, FERRITE		415	4-022-115-00	HOLDER, AC CORD	
406	* A-1136-087-A	B3 BOARD, COMPLETE		416	* A-1316-514-A	G1 BOARD, COMPLETE (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
407	* A-1394-982-A	J1 BOARD, COMPLETE		416	* A-1316-528-A	G BOARD, COMPLETE (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
408	* A-1136-088-A	BD BOARD, COMPLETE		417	* A-1343-830-A	DS BOARD, COMPLETE	
409	4-076-679-01	TERMINAL BOARD		418	△ 1-453-335-11	TRANSFORMER ASSY, FLYBACK NX-4010//M	
410	1-790-082-11	CABLE, RF					
411	* 4-316-015-00	HOLDER, WIRE					
412	* 4-046-677-11	HOLDER (B), PRINTED CIRCUIT BOARD					
413	* A-1346-923-A	D BOARD, COMPLETE (ES48)					
413	* A-1346-924-A	D BOARD, COMPLETE (ES53)					
413	* A-1346-925-A	D BOARD, COMPLETE (ES61)					
413	* A-1346-937-A	D BOARD, COMPLETE (ES43)					

8-10. PICTURE TUBE BLOCK

● : 7-685-663-71 +BVTP 4X16

The components identified by shading
and mark △ are critical for safety.
Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
451	* A-1332-037-A	CR BOARD, COMPLETE		459	* A-1332-038-A	CG BOARD, COMPLETE	
452	△ 1-452-790-41	NECK ASSY (NA-295)		460	△ 8-733-574-15	PICTURE TUBE 07MAC2 (B) (HEATER)	(ES43)
453	* A-1391-025-A	ZR BOARD, COMPLETE	454	460	△ 8-733-575-15	PICTURE TUBE 07MAC3 (B) (HEATER)	(ES48, ES53)
454	△ 1-451-476-21	DEFLECTION YOKE		460	△ 8-733-576-15	PICTURE TUBE 07MAC4 (B) (HEATER)	(ES61)
455	△ 8-733-571-15	PICTURE TUBE 07MXC2 (R) (HEATER)	(ES43)	461	* A-1391-027-A	ZB BOARD, COMPLETE	454
455	△ 8-733-572-15	PICTURE TUBE 07MXC3 (R) (HEATER)	(ES48, ES53)	462	* A-1332-039-A	CB BOARD, COMPLETE	
455	△ 8-733-573-15	PICTURE TUBE 07MXC4 (R) (HEATER)	(ES61)	463	4-373-137-01	CAP (Z), RUBBER	
456	4-040-131-21	LENS (LINNIT POINT 6) (ES61)		464	△ 8-598-955-12	BLOCK ASSY, HIGH-VOLTAGE	
456	4-056-258-11	LENS (DELTA 78) (EXCEPT ES61)		465	* 4-066-144-02	HOLDER, HVR	
457	△ 8-733-570-15	PICTURE TUBE 07MXC2 (G) (HEATER)		466	* 4-066-135-01	STAY (R), SIDE	
458	* A-1391-026-A	ZG BOARD, COMPLETE	454	467	* 4-066-134-01	STAY (L), SIDE	

H1

SECTION 9

ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark $\triangle$ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

The components identified by $\square$ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• CAPACITORS
PF : μ F

• There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	* A-1372-787-A	H1 BOARD, COMPLETE		R3108	1-216-049-91	RES-CHIP 1K	5% 1/10W
		(ES48, ES53, ES61)		R3109	1-208-806-11	METAL CHIP 10K	0.5% 1/10W
	*****			R3110	1-216-295-91	SHORT 0	
	* 4-072-004-01	HOLDER, LED (D3002)		R3111	1-216-295-91	SHORT 0	
				R3112	1-216-295-91	SHORT 0	
				R3113	1-216-033-00	RES-CHIP 220	5% 1/10W
				R3115	1-208-804-11	METAL CHIP 8.2K	0.5% 1/10W
	<CAPACITOR>				<SWITCH>		
C3101	1-126-157-11	ELECT 10 μ F	20% 16V	S3101	1-692-431-21	SWITCH, TACTIL (PROG +)	
	<CONNECTOR>			S3102	1-692-431-21	SWITCH, TACTIL (PROG -)	
CN3101	* 1-564-519-11	PLUG, CONNECTOR 4P		S3103	1-692-431-21	SWITCH, TACTIL (VOL +)	
CN3102	* 1-564-525-11	PLUG, CONNECTOR 10P		S3104	1-692-431-21	SWITCH, TACTIL (VOL -)	
CN3103	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P		S3105	1-692-431-21	SWITCH, TACTIL (TV/VIDEO)	
CN3104	* 1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P		S3106	$\triangle$ 1-571-433-31	SWITCH, PUSH (AC POWER) (POWER)	
	<DIODE>			*****			
D3002	8-719-064-11	DIODE SPR-325MVW	(ON/STANDBY/TIMER)		* A-1372-803-A	H1 BOARD, COMPLETE (ES43)	

	<IC>				* 4-072-004-01	HOLDER, LED (D3101)	
IC3101	8-742-205-30	HYB IC SBX3081-01(30)			<CAPACITOR>		
	<TRANSISTOR>			C3101	1-126-157-11	ELECT 10 μ F	20% 16V
Q3101	8-729-120-28	TRANSISTOR 2SC1623-L5L6			<CONNECTOR>		
Q3102	8-729-120-28	TRANSISTOR 2SC1623-L5L6		CN3101	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
	<RESISTOR>			CN3102	* 1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
R3101	1-208-780-11	METAL CHIP 820	0.5% 1/10W	CN3103	* 1-564-508-11	PLUG, CONNECTOR 5P	
R3102	1-208-788-11	METAL CHIP 1.8K	0.5% 1/10W		<DIODE>		
R3103	1-208-793-11	METAL CHIP 3K	0.5% 1/10W	D3103	8-719-064-11	DIODE SPR-325MVW	(ON/STANDBY/TIMER)
R3104	1-208-798-11	METAL CHIP 4.7K	0.5% 1/10W		<IC>		
R3105	1-216-041-00	RES-CHIP 470	5% 1/10W	IC3101	8-742-205-30	HYB IC SBX3081-01(30)	
R3106	1-216-037-00	RES-CHIP 330	5% 1/10W				
R3107	1-208-806-11	METAL CHIP 10K	0.5% 1/10W				

H1 **H2**

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<TRANSISTOR>				<TRANSISTOR>			
Q3101	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q3201	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3102	8-729-120-28	TRANSISTOR 2SC1623-L5L6		<RESISTOR>			
<RESISTOR>				R3200	1-216-295-91	SHORT	0
R3101	1-216-295-91	SHORT	0	R3201	1-208-798-11	METAL CHIP	4.7K 0.5% 1/10W
R3102	1-216-037-00	RES-CHIP	330 5% 1/10W	R3202	1-208-792-11	METAL CHIP	2.7K 0.5% 1/10W
R3103	1-216-295-91	SHORT	0	R3203	1-208-785-11	METAL CHIP	1.3K 0.5% 1/10W
R3104	1-216-295-91	SHORT	0	R3204	1-208-806-11	METAL CHIP	10K 0.5% 1/10W
R3105	1-216-037-00	RES-CHIP	330 5% 1/10W	R3205	1-216-295-91	SHORT	0
R3106	1-216-295-91	SHORT	0	R3206	1-216-073-00	RES-CHIP	10K 5% 1/10W
R3107	1-216-041-00	RES-CHIP	470 5% 1/10W	R3207	1-216-033-00	RES-CHIP	220 5% 1/10W
R3108	1-208-806-11	METAL CHIP	10K 0.5% 1/10W	R3208	1-216-033-00	RES-CHIP	220 5% 1/10W
R3109	1-208-806-11	METAL CHIP	10K 0.5% 1/10W	R3209	1-216-033-00	RES-CHIP	220 5% 1/10W
<SWITCH>				R3210	1-216-033-00	RES-CHIP	220 5% 1/10W
S3101	Δ 1-571-433-31	SWITCH, PUSH (AC POWER) (POWER)		R3212	1-216-295-91	SHORT	0
*****				R3213	1-216-295-91	SHORT	0
* A-1372-788-A H2 BOARD, COMPLETE (ES48, ES53, ES61)				R3219	1-216-033-00	RES-CHIP	220 5% 1/10W
*****				<SWITCH>			
<CAPACITOR>				S3201	1-572-198-11	SWITCH, KEYBOARD (MENU)	
C3201	1-126-157-11	ELECT	10 μ F 20% 16V	S3202	1-572-198-11	SWITCH, KEYBOARD (MENU +)	
C3202	1-163-037-11	CERAMIC CHIP	0.022 μ F 10% 50V	S3203	1-572-198-11	SWITCH, KEYBOARD (MENU -)	
C3203	1-163-037-11	CERAMIC CHIP	0.022 μ F 10% 50V	S3204	1-572-198-11	SWITCH, KEYBOARD (ENTER)	
C3204	1-163-037-11	CERAMIC CHIP	0.022 μ F 10% 50V	S3205	1-572-198-11	SWITCH, KEYBOARD (AUTO CONVER)	
<CONNECTOR>				S3206	1-572-198-11	SWITCH, KEYBOARD (AUTO PROGR)	
CN3201	*1-564-519-11	PLUG, CONNECTOR 4P		*****			
CN3202	*1-564-520-11	PLUG, CONNECTOR 5P		* A-1372-804-A H2 BOARD, COMPLETE (ES43)			
<DIODE>				*****			
D3203	8-719-976-96	DIODE DTZ4.7C		<CAPACITOR>			
<JACK>				C3201	1-126-157-11	ELECT	10 μ F 20% 16V
J3201	1-691-293-11	JACK (HEAD PHONE)		C3202	1-163-037-11	CERAMIC CHIP	0.022 μ F 10% 50V
<CHIP CONDUCTOR>				C3203	1-163-037-11	CERAMIC CHIP	0.022 μ F 10% 50V
JR3206	1-216-295-91	SHORT	0	C3206	1-163-037-11	CERAMIC CHIP	0.022 μ F 10% 50V
<COIL>				<CONNECTOR>			
L3201	1-414-189-31	INDUCTOR	100 μ H	CN3201	*1-564-519-11	PLUG, CONNECTOR 4P	
L3202	1-414-189-31	INDUCTOR	100 μ H	CN3202	*1-564-520-11	PLUG, CONNECTOR 5P	
				CN3203	*1-564-526-31	PLUG, CONNECTOR 11P	
				<DIODE>			
				D3207	8-719-976-96	DIODE DTZ4.7C	
				<JACK>			
				J3201	1-691-293-11	JACK (HEAD PHONE)	
				J3202	1-565-665-12	TERMINAL, S 4P (VIDEO IN 4/S VIDEO)	
				J3203	1-565-745-11	PIN JACK BLOCK 3P (VIDEO IN 4)	

The components identified by shading
and mark Δ are critical for safety.
Replace only with part number specified.

KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1 RM-961

H2 **H3** **ZR**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<COIL>				<RESISTOR>			
L3201	1-414-189-31	INDUCTOR	100μH	R3301	1-216-025-00	RES-CHIP 100 5% 1/10W	
L3202	1-414-189-31	INDUCTOR	100μH	R3302	1-216-025-00	RES-CHIP 100 5% 1/10W	
<TRANSISTOR>				*****			
Q3201	8-729-120-28	TRANSISTOR 2SC1623-L5L6		* A-1391-025-A ZR BOARD, COMPLETE			
<RESISTOR>				*****			
R3201	1-208-780-11	METAL CHIP	820 0.5% 1/10W	4-382-854-11 SCREW (M3X10), P, SW (+)			
R3202	1-208-788-11	METAL CHIP	1.8K 0.5% 1/10W	(Q7408, Q7409)			
R3203	1-208-793-11	METAL CHIP	3K 0.5% 1/10W	<CAPACITOR>			
R3204	1-208-798-11	METAL CHIP	4.7K 0.5% 1/10W	C7401	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R3205	1-208-804-11	METAL CHIP	8.2K 0.5% 1/10W	C7402	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
R3206	1-208-798-11	METAL CHIP	4.7K 0.5% 1/10W	C7403	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
R3207	1-208-792-11	METAL CHIP	2.7K 0.5% 1/10W	C7404	1-104-664-11	ELECT 47μF	20% 16V
R3208	1-208-785-11	METAL CHIP	1.3K 0.5% 1/10W	C7405	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
R3209	1-208-806-11	METAL CHIP	10K 0.5% 1/10W	C7406	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
R3210	1-216-295-91	SHORT	0	C7407	1-104-989-91	MYLAR 0.0022μF	10% 200V
R3211	1-216-295-91	SHORT	0	C7408	1-104-989-91	MYLAR 0.0022μF	10% 200V
R3212	1-216-073-00	RES-CHIP	10K 5% 1/10W	C7409	1-107-667-11	ELECT 2.2μF	20% 160V
R3213	1-216-033-00	RES-CHIP	220 5% 1/10W	C7410	1-130-471-00	MYLAR 0.001μF	5% 50V
R3214	1-216-033-00	RES-CHIP	220 5% 1/10W	C7411	1-130-471-00	MYLAR 0.001μF	5% 50V
R3215	1-216-033-00	RES-CHIP	220 5% 1/10W	C7412	1-107-364-11	MYLAR 0.01μF	10% 200V
R3216	1-216-033-00	RES-CHIP	220 5% 1/10W	C7413	1-126-968-11	ELECT 100μF	20% 50V
R3217	1-216-025-91	RES-CHIP	100 5% 1/10W	C7414	1-126-968-11	ELECT 100μF	20% 50V
R3218	1-216-025-91	RES-CHIP	100 5% 1/10W	C7415	1-107-645-11	ELECT 22μF	20% 200V
R3219	1-216-033-00	RES-CHIP	220 5% 1/10W	C7416	1-161-830-00	CERAMIC 0.0047μF	500V
<SWITCH>				C7418	1-126-935-11	ELECT 470μF	20% 6.3V
S3201	1-572-198-11	SWITCH, KEYBOARD (PROG +)		<CONNECTOR>			
S3202	1-572-198-11	SWITCH, KEYBOARD (PROG -)		CN7401	* 1-564-509-11	PLUG, CONNECTOR 6P	
S3203	1-572-198-11	SWITCH, KEYBOARD (VOL +)		CN7403	* 1-564-518-11	PLUG, CONNECTOR 3P	
S3204	1-572-198-11	SWITCH, KEYBOARD (VOL -)		CN7404	* 1-564-507-11	PLUG, CONNECTOR 4P	
S3205	1-572-198-11	SWITCH, KEYBOARD (TV/VIDEO)		CN7405	* 1-580-844-11	PIN, CONNECTOR (POWER)	
S3206	1-572-198-11	SWITCH, KEYBOARD (MENU)		<DIODE>			
S3207	1-572-198-11	SWITCH, KEYBOARD (MENU +)		D7401	8-719-988-61	DIODE 1SS355TE-17	
S3208	1-572-198-11	SWITCH, KEYBOARD (MENU -)		D7403	8-719-921-86	DIODE MTZJ-13	
S3209	1-572-198-11	SWITCH, KEYBOARD (ENTER)		D7404	8-719-921-86	DIODE MTZJ-13	
S3210	1-572-198-11	SWITCH, KEYBOARD (AUTO CONVER)		<CONNECTOR>			
S3211	1-572-198-11	SWITCH, KEYBOARD (AUTO PROGR)		*****			
*****				DY7401 Δ 1-451-476-21 DEFLECTION YOKE (R)			
* A-1372-789-A H3 BOARD, COMPLETE				<COIL>			
(ES48, ES53, ES61)				L7401	1-412-911-11	FERRITE	0μH
*****				L7402	1-414-187-11	INDUCTOR	47μH
<CAPACITOR>				<TRANSISTOR>			
CN3301	* 1-564-526-31	PLUG, CONNECTOR 11P		Q7401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
<JACK>				Q7402	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
J3301	1-568-807-21	TERMINAL BLOCK, (S) 4P (VIDEO IN 4)					



The components identified by shading
and mark Δ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q7403	8-729-120-28	TRANSISTOR 2SC1623-L5L6		C7606	1-104-989-91	MYLAR 0.0022 μ F 10% 200V	
Q7404	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		C7607	1-107-667-11	ELECT 2.2 μ F 20% 160V	
Q7405	8-729-120-28	TRANSISTOR 2SC1623-L5L6		C7608	1-130-471-00	MYLAR 0.001 μ F 5% 50V	
Q7406	8-729-119-76	TRANSISTOR 2SA1175-HFE		C7609	1-130-471-00	MYLAR 0.001 μ F 5% 50V	
Q7407	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA		C7610	1-163-021-91	CERAMIC CHIP 0.01 μ F 10% 50V	
Q7408	8-729-045-04	TRANSISTOR 2SC5511		C7611	1-163-021-91	CERAMIC CHIP 0.01 μ F 10% 50V	
Q7409	8-729-045-05	TRANSISTOR 2SA2005		C7612	1-107-364-11	MYLAR 0.01 μ F 10% 200V	
Q7410	8-729-120-28	TRANSISTOR 2SC1623-L5L6		C7613	1-126-968-11	ELECT 100 μ F 20% 50V	
<RESISTOR>				C7614	1-126-968-11	ELECT 100 μ F 20% 50V	
R7401	1-208-790-11	METAL CHIP 2.2K 0.5% 1/10W		C7615	1-107-645-11	ELECT 22 μ F 20% 200V	
R7402	1-208-800-11	METAL CHIP 5.6K 0.5% 1/10W		C7616	1-161-830-00	CERAMIC 0.0047 μ F 500V	
R7403	1-208-806-11	METAL CHIP 10K 0.5% 1/10W		C7617	1-106-220-00	MYLAR 0.1 μ F 10% 100V	
R7404	1-208-806-11	METAL CHIP 10K 0.5% 1/10W		C7618	1-106-220-00	MYLAR 0.1 μ F 10% 100V	
R7405	1-216-475-11	METAL OXIDE 120 5% 3W		C7620	1-126-935-11	ELECT 470 μ F 20% 6.3V	
R7406	1-216-073-00	RES-CHIP 10K 5% 1/10W		C7621	1-126-960-11	ELECT 1 μ F 20% 50V	
R7407	1-249-385-11	CARBON 2.2 5% 1/4W		<CONNECTOR>			
R7408	1-216-475-11	METAL OXIDE 120 5% 3W		CN7601	*1-564-509-11	PLUG, CONNECTOR 6P	
R7409	1-216-009-91	RES-CHIP 22 5% 1/10W		CN7602	*1-564-509-11	PLUG, CONNECTOR 6P	
R7410	1-216-009-91	RES-CHIP 22 5% 1/10W		CN7603	*1-564-507-11	PLUG, CONNECTOR 4P	
R7411	1-249-414-11	CARBON 560 5% 1/4W		CN7604	*1-564-506-11	PLUG, CONNECTOR 3P	
R7412	1-216-033-00	RES-CHIP 220 5% 1/10W		CN7605	*1-564-506-11	PLUG, CONNECTOR 3P	
R7413	1-216-049-91	RES-CHIP 1K 5% 1/10W		CN7606	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
R7414	1-216-033-00	RES-CHIP 220 5% 1/10W		CN7607	*1-564-506-11	PLUG, CONNECTOR 3P	
R7415	1-216-049-91	RES-CHIP 1K 5% 1/10W		CN7608	*1-564-507-11	PLUG, CONNECTOR 4P	
R7416	1-216-001-00	RES-CHIP 10 5% 1/10W		CN7609	1-695-915-11	TAB (CONTACT)	
R7417	1-249-414-11	CARBON 560 5% 1/4W		<DIODE>			
R7418	1-216-001-00	RES-CHIP 10 5% 1/10W		D7601	8-719-921-86	DIODE MTZJ-13	
R7419	1-249-415-11	CARBON 680 5% 1/4W		D7602	8-719-921-86	DIODE MTZJ-13	
R7420	1-249-433-11	CARBON 22K 5% 1/4W		D7603	8-719-988-61	DIODE 1SS355TE-17	
R7421	1-249-433-11	CARBON 22K 5% 1/4W		<CONNECTOR>			
R7422	1-249-415-11	CARBON 680 5% 1/4W		DY7601 Δ 1-451-476-21 DEFLECTION YOKE (G)			
R7423	1-249-417-11	CARBON 1K 5% 1/4W		<COIL>			
R7424	1-249-405-11	CARBON 100 5% 1/4W		L7601	1-412-911-11	FERRITE 0 μ H	
R7425	1-249-385-11	CARBON 2.2 5% 1/4W		L7602	1-414-187-11	INDUCTOR 47 μ H	
R7426	1-249-385-11	CARBON 2.2 5% 1/4W		<TRANSISTOR>			
R7427	1-249-405-11	CARBON 100 5% 1/4W		Q7601	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
R7428	1-215-913-11	METAL OXIDE 220 5% 3W		Q7602	8-729-119-76	TRANSISTOR 2SA1175-HFE	
R7431	1-216-049-91	RES-CHIP 1K 5% 1/10W		Q7603	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA	
R7432	1-216-025-91	RES-CHIP 100 5% 1/10W		Q7604	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
R7433	1-216-009-91	RES-CHIP 22 5% 1/10W		Q7605	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
R7434	1-216-295-91	SHORT 0		Q7606	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
*****				Q7607	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
* A-1391-026-A ZG BOARD, COMPLETE				Q7608	8-729-045-04	TRANSISTOR 2SC5511	
*****				Q7609	8-729-045-05	TRANSISTOR 2SA2005	
4-382-854-11 SCREW (M3X10), P, SW (+)				Q7610	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
(Q7608, Q7609)				<CAPACITOR>			
C7601	1-163-021-91	CERAMIC CHIP 0.01 μ F 10% 50V		C7601	1-163-021-91	CERAMIC CHIP 0.01 μ F 10% 50V	
C7602	1-163-021-91	CERAMIC CHIP 0.01 μ F 10% 50V		C7602	1-163-021-91	CERAMIC CHIP 0.01 μ F 10% 50V	
C7603	1-163-038-91	CERAMIC CHIP 0.1 μ F 25V		C7603	1-163-038-91	CERAMIC CHIP 0.1 μ F 25V	
C7604	1-104-664-11	ELECT 47 μ F 20% 16V		C7604	1-104-664-11	ELECT 47 μ F 20% 16V	
C7605	1-104-989-91	MYLAR 0.0022 μ F 10% 200V		C7605	1-104-989-91	MYLAR 0.0022 μ F 10% 200V	

The components identified by shading
and mark $\triangle$ are critical for safety.
Replace only with part number specified.

KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1 RM-961



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
		<RESISTOR>					
R7601	1-208-806-11	METAL CHIP 10K	0.5% 1/10W	C7815	1-107-645-11	ELECT 22μF 20% 200V	
R7602	1-208-790-11	METAL CHIP 2.2K	0.5% 1/10W	C7816	1-161-830-00	CERAMIC 0.0047μF 500V	
R7603	1-208-800-11	METAL CHIP 5.6K	0.5% 1/10W	C7818	1-126-935-11	ELECT 470μF 20% 6.3V	
R7604	1-208-806-11	METAL CHIP 10K	0.5% 1/10W				
R7605	1-216-475-11	METAL OXIDE 120	5% 3W			<CONNECTOR>	
R7606	1-216-033-00	RES-CHIP 220	5% 1/10W	CN7801	* 1-564-509-11	PLUG, CONNECTOR 6P	
R7607	1-216-033-00	RES-CHIP 220	5% 1/10W	CN7802	* 1-564-507-11	PLUG, CONNECTOR 4P	
R7608	1-249-393-11	CARBON 10	5% 1/4W	CN7803	* 1-564-506-11	PLUG, CONNECTOR 3P	
R7609	1-216-001-00	RES-CHIP 10	5% 1/10W	CN7804	* 1-580-844-11	PIN, CONNECTOR (POWER)	
R7610	1-249-385-11	CARBON 2.2	5% 1/4W	CN7805	* 1-564-506-11	PLUG, CONNECTOR 3P	
R7611	1-216-475-11	METAL OXIDE 120	5% 3W			<DIODE>	
R7612	1-249-414-11	CARBON 560	5% 1/4W	D7801	8-719-921-86	DIODE MTZJ-13	
R7613	1-216-073-00	RES-CHIP 10K	5% 1/10W	D7802	8-719-921-86	DIODE MTZJ-13	
R7614	1-249-414-11	CARBON 560	5% 1/4W	D7803	8-719-988-61	DIODE 1SS355TE-17	
R7615	1-249-415-11	CARBON 680	5% 1/4W			<CONNECTOR>	
R7616	1-249-433-11	CARBON 22K	5% 1/4W				
R7617	1-249-433-11	CARBON 22K	5% 1/4W				
R7618	1-249-415-11	CARBON 680	5% 1/4W				
R7619	1-216-009-91	RES-CHIP 22	5% 1/10W				
R7620	1-216-009-91	RES-CHIP 22	5% 1/10W	DY7801 $\triangle$	1-451-476-21	DEFLECTION YOKE (B)	
R7621	1-249-417-11	CARBON 1K	5% 1/4W			<COIL>	
R7622	1-216-049-91	RES-CHIP 1K	5% 1/10W	L7801	1-412-911-11	FERRITE 0μH	
R7623	1-216-049-91	RES-CHIP 1K	5% 1/10W	L7802	1-414-187-11	INDUCTOR 47μH	
R7624	1-249-405-11	CARBON 100	5% 1/4W				
R7625	1-249-385-11	CARBON 2.2	5% 1/4W			<TRANSISTOR>	
R7626	1-249-385-11	CARBON 2.2	5% 1/4W	Q7801	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
R7627	1-249-405-11	CARBON 100	5% 1/4W	Q7802	8-729-119-76	TRANSISTOR 2SA1175-HFE	
R7628	1-215-913-11	METAL OXIDE 220	5% 3W	Q7803	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA	
R7631	1-216-049-91	RES-CHIP 1K	5% 1/10W	Q7804	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
R7632	1-216-025-91	RES-CHIP 100	5% 1/10W	Q7805	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
R7633	1-216-009-91	RES-CHIP 22	5% 1/10W	Q7806	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
R7634	1-216-295-91	SHORT 0		Q7807	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
*****				Q7808	8-729-045-04	TRANSISTOR 2SC5511	
* A-1391-027-A ZB BOARD, COMPLETE				Q7809	8-729-045-05	TRANSISTOR 2SA2005	
*****				Q7810	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
4-382-854-11 SCREW (M3X10), P, SW (+)						<RESISTOR>	
(Q7808, Q7809)							
		<CAPACITOR>		R7801	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	
C7801	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	R7802	1-208-790-11	METAL CHIP 2.2K 0.5% 1/10W	
C7802	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	R7803	1-208-800-11	METAL CHIP 5.6K 0.5% 1/10W	
C7803	1-163-038-91	CERAMIC CHIP 0.1μF	25V	R7804	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	
C7804	1-104-664-11	ELECT 47μF	20% 16V	R7805	1-216-033-00	RES-CHIP 220 5% 1/10W	
C7805	1-104-989-91	MYLAR 0.0022μF	10% 200V	R7806	1-216-033-00	RES-CHIP 220 5% 1/10W	
C7806	1-104-989-91	MYLAR 0.0022μF	10% 200V	R7807	1-216-475-11	METAL OXIDE 120 5% 3W	
C7807	1-107-667-11	ELECT 2.2μF	20% 160V	R7808	1-216-001-00	RES-CHIP 10 5% 1/10W	
C7808	1-130-471-00	MYLAR 0.001μF	5% 50V	R7809	1-216-001-00	RES-CHIP 10 5% 1/10W	
C7809	1-130-471-00	MYLAR 0.001μF	5% 50V	R7810	1-249-385-11	CARBON 2.2 5% 1/4W	
C7810	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V				
C7811	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	R7811	1-216-475-11	METAL OXIDE 120 5% 3W	
C7812	1-107-364-11	MYLAR 0.01μF	10% 200V	R7812	1-216-073-00	RES-CHIP 10K 5% 1/10W	
C7813	1-126-968-11	ELECT 100μF	20% 50V	R7813	1-249-414-11	CARBON 560 5% 1/4W	
C7814	1-126-968-11	ELECT 100μF	20% 50V	R7814	1-216-009-91	RES-CHIP 22 5% 1/10W	
				R7815	1-216-009-91	RES-CHIP 22 5% 1/10W	



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REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK		
R7816	1-249-414-11	CARBON	560	5%	1/4W	IC7101	<IC>				
R7817	1-249-415-11	CARBON	680	5%	1/4W		8-759-360-83 IC TDA6111Q/N4				
R7818	1-249-433-11	CARBON	22K	5%	1/4W						
R7819	1-249-433-11	CARBON	22K	5%	1/4W						
R7820	1-249-415-11	CARBON	680	5%	1/4W						
						<JACK>					
R7821	1-249-417-11	CARBON	1K	5%	1/4W	J7101	△1-251-182-41 SOCKET, PICTURE TUBE				
R7822	1-216-049-91	RES-CHIP	1K	5%	1/10W						
R7823	1-216-049-91	RES-CHIP	1K	5%	1/10W						
R7824	1-249-405-11	CARBON	100	5%	1/4W						
R7825	1-249-385-11	CARBON	2.2	5%	1/4W						
						<COIL>					
R7826	1-249-385-11	CARBON	2.2	5%	1/4W	L7102	1-414-223-11	INDUCTOR	470μH		
R7827	1-249-405-11	CARBON	100	5%	1/4W	L7103	1-414-181-11	INDUCTOR	4.7μH		
R7828	1-215-913-11	METAL OXIDE	220	5%	3W	L7104	1-414-187-11	INDUCTOR	47μH		
R7831	1-216-049-91	RES-CHIP	1K	5%	1/10W						
R7832	1-216-025-91	RES-CHIP	100	5%	1/10W	<NEON LAMP>					
R7833	1-216-009-91	RES-CHIP	22	5%	1/10W	NL7101	1-576-354-21	GAP, SPARK			
R7834	1-216-295-91	SHORT	0			NL7102	1-517-729-31	GAP, SPARK			
*****						NL7103	1-576-354-21	GAP, SPARK			
* A-1332-037-A CR BOARD, COMPLETE						NL7104	1-576-354-21	GAP, SPARK			
*****						NL7105	1-576-354-21	GAP, SPARK			
4-382-854-01 SCREW (M3X8), P, SW (+) (IC7101)						<TRANSISTOR>					
<CAPACITOR>						Q7101	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
						Q7103	8-729-255-12	TRANSISTOR 2SC2551-O			
C7102	1-162-115-00	CERAMIC	330pF	10%	2KV	Q7104	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
C7103	1-107-652-11	ELECT	10μF	20%	250V						
C7104	1-126-768-11	ELECT	2200μF	20%	16V	<RESISTOR>					
C7105	1-162-115-00	CERAMIC	330pF	10%	2KV	R7101	1-260-132-11	CARBON	560K	5% 1/2W	
C7106	1-163-038-91	CERAMIC CHIP	0.1μF		25V	R7102	1-249-389-11	CARBON	4.7	5% 1/4W	
C7107	1-163-038-91	CERAMIC CHIP	0.1μF		25V	R7103	1-216-295-91	SHORT	0		
C7108	1-126-967-11	ELECT	47μF	20%	50V	R7105	1-260-117-11	CARBON	33K	5% 1/2W	
C7110	1-102-050-00	CERAMIC	0.01μF	99%	500V	R7106	1-219-743-11	CARBON	100	5% 1/2W	
C7111	1-161-830-00	CERAMIC	0.0047μF		500V	R7107	1-208-801-11	METAL CHIP	6.2K	0.5% 1/10W	
C7112	1-163-224-11	CERAMIC CHIP	7pF		0.25pF 50V	R7108	1-260-133-11	CARBON	680K	5% 1/2W	
C7116	1-107-957-11	ELECT	1μF	20%	250V	R7109	1-208-808-11	METAL CHIP	12K	0.5% 1/10W	
C7118	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	R7110	1-208-790-11	METAL CHIP	2.2K	0.5% 1/10W	
<CONNECTOR>						R7111	1-216-033-00	RES-CHIP	220	5% 1/10W	
CN7101	*1-564-512-11	PLUG, CONNECTOR 9P				R7112	1-249-424-11	CARBON	3.9K	5% 1/4W	
CN7102	*1-564-510-11	PLUG, CONNECTOR 7P				R7113	1-216-295-91	SHORT	0		
CN7103	*1-564-512-11	PLUG, CONNECTOR 9P				R7114	1-216-660-11	METAL CHIP	2.4K	0.5% 1/10W	
CN7104	1-785-879-11	CONNECTOR, ONE TOUCH				R7115	1-208-782-11	METAL CHIP	1K	0.5% 1/10W	
CN7107	1-695-915-11	TAB (CONTACT)				R7116	1-215-929-11	METAL OXIDE	100K	5% 3W	
<DIODE>						R7117	1-260-093-11	CARBON	330	5% 1/2W	
D7102	8-719-921-86	DIODE MTZJ-13				R7118	1-260-087-11	CARBON	100	5% 1/2W	
D7103	8-719-901-83	DIODE 1SS83				R7119	1-260-099-11	CARBON	1K	5% 1/2W	
D7104	8-719-901-83	DIODE 1SS83				R7120	1-216-081-00	RES-CHIP	22K	5% 1/10W	
D7105	8-719-901-83	DIODE 1SS83				R7122	1-216-025-91	RES-CHIP	100	5% 1/10W	
D7106	8-719-901-83	DIODE 1SS83				R7123	1-216-295-91	SHORT	0		
D7108	8-719-988-61	DIODE 1SS355TE-17				R7124	1-216-073-00	RES-CHIP	10K	5% 1/10W	
D7109	8-719-921-86	DIODE MTZJ-13				R7128	1-208-818-11	METAL CHIP	33K	0.5% 1/10W	
D7110	8-719-921-86	DIODE MTZJ-13				R7129	1-249-417-11	CARBON	1K	5% 1/4W	
						R7130	1-216-069-00	RES-CHIP	6.8K	5% 1/10W	
						R7131	1-216-049-91	RES-CHIP	1K	5% 1/10W	
						R7132	1-216-295-91	SHORT	0		

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KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1 RM-961



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R7133	1-208-834-11	METAL CHIP 150K	0.5% 1/10W			<JACK>	
R7134	1-216-049-91	RES-CHIP 1K	5% 1/10W				
R7135	1-216-053-00	RES-CHIP 1.5K	5% 1/10W	J7201	Δ 1-251-182-41	SOCKET, PICTURE TUBE	
		<SPARK GAP>				<COIL>	
SG7101	1-519-422-11	GAP, SPARK		L7201	1-414-223-11	INDUCTOR 470 μ H	
SG7103	1-519-422-11	GAP, SPARK		L7203	1-414-181-11	INDUCTOR 4.7 μ H	
		<TEST PIN>		L7204	1-414-187-11	INDUCTOR 47 μ H	
TP7102	*1-535-881-21	TERMINAL, TP (AUTO INSERTION)				<NEON LAMP>	
TP7105	*1-535-881-21	TERMINAL, TP (AUTO INSERTION)		NL7201	1-576-354-21	GAP, SPARK	
*****				NL7202	1-576-354-21	GAP, SPARK	
				NL7203	1-517-729-31	GAP, SPARK	
				NL7204	1-576-354-21	GAP, SPARK	
				NL7205	1-576-354-21	GAP, SPARK	
						<TRANSISTOR>	
				Q7201	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
				Q7202	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
				Q7203	8-729-255-12	TRANSISTOR 2SC2551-O	
						<RESISTOR>	
				R7201	1-260-132-11	CARBON 560K	5% 1/2W
				R7202	1-216-295-91	SHORT 0	
				R7203	1-208-846-11	METAL CHIP 470K	0.5% 1/10W
				R7204	1-219-743-11	CARBON 100	5% 1/2W
				R7205	1-260-117-11	CARBON 33K	5% 1/2W
				R7206	1-208-801-11	METAL CHIP 6.2K	0.5% 1/10W
				R7207	1-208-808-11	METAL CHIP 12K	0.5% 1/10W
				R7208	1-216-033-00	RES-CHIP 220	5% 1/10W
				R7209	1-260-133-11	CARBON 680K	5% 1/2W
				R7210	1-208-790-11	METAL CHIP 2.2K	0.5% 1/10W
				R7211	1-249-424-11	CARBON 3.9K	5% 1/4W
				R7212	1-208-789-11	METAL CHIP 2K	0.5% 1/10W
				R7213	1-215-929-11	METAL OXIDE 100K	5% 3W
				R7214	1-216-295-91	SHORT 0	
				R7215	1-208-782-11	METAL CHIP 1K	0.5% 1/10W
				R7216	1-260-093-11	CARBON 330	5% 1/2W
				R7217	1-216-295-91	SHORT 0	
				R7218	1-260-099-11	CARBON 1K	5% 1/2W
				R7219	1-216-295-91	SHORT 0	
				R7220	1-216-025-91	RES-CHIP 100	5% 1/10W
				R7222	1-216-295-91	SHORT 0	
				R7223	1-208-802-11	METAL CHIP 6.8K	0.5% 1/10W
				R7224	1-208-799-11	METAL CHIP 5.1K	0.5% 1/10W
				R7225	1-216-081-00	RES-CHIP 22K	5% 1/10W
				R7229	1-249-417-11	CARBON 1K	5% 1/4W
				R7235	1-216-053-00	RES-CHIP 1.5K	5% 1/10W
						<SPARK GAP>	
				SG7201	1-519-422-11	GAP, SPARK	
				SG7203	1-519-422-11	GAP, SPARK	
IC7201	8-759-360-83	IC TDA6111Q/N4					



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<TEST PIN>				<COIL>			
TP7202	*1-535-881-21	TERMINAL, TP (AUTO INSERTION)		L7301	1-414-223-11	INDUCTOR 470μH	
TP7205	*1-535-881-21	TERMINAL, TP (AUTO INSERTION)		L7303	1-414-181-11	INDUCTOR 4.7μH	
*****				L7304	1-414-187-11	INDUCTOR 47μH	
*A-1332-039-A CB BOARD, COMPLETE *****				<NEON LAMP>			
4-382-854-01 SCREW (M3X8), P, SW (+) (IC7301)				NL7301	1-576-354-21	GAP, SPARK	
<CAPACITOR>				NL7302	1-517-729-31	GAP, SPARK	
C7302	1-162-115-00	CERAMIC 330pF 10% 2KV		NL7303	1-576-354-21	GAP, SPARK	
C7303	1-162-115-00	CERAMIC 330pF 10% 2KV		NL7304	1-576-354-21	GAP, SPARK	
C7304	1-126-768-11	ELECT 2200μF 20% 16V		NL7305	1-576-354-21	GAP, SPARK	
C7305	1-163-038-91	CERAMIC CHIP 0.1μF 25V		<TRANSISTOR>			
C7306	1-163-038-91	CERAMIC CHIP 0.1μF 25V		Q7301	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
C7307	1-107-652-11	ELECT 10μF 20% 250V		Q7302	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
C7308	1-126-967-11	ELECT 47μF 20% 50V		Q7303	8-729-255-12	TRANSISTOR 2SC2551-O	
C7309	1-163-085-00	CERAMIC CHIP 2pF 0.25pF 50V		Q7305	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C7311	1-102-050-00	CERAMIC 0.01μF 99% 500V		Q7306	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
C7312	1-161-830-00	CERAMIC 0.0047μF 500V		<RESISTOR>			
C7313	1-163-091-00	CERAMIC CHIP 8pF 0.25pF 50V		R7301	1-219-743-11	CARBON 100 5% 1/2W	
C7314	1-126-964-11	ELECT 10μF 20% 50V		R7302	1-260-132-11	CARBON 560K 5% 1/2W	
C7315	1-126-960-11	ELECT 1μF 20% 50V		R7304	1-216-295-91	SHORT 0	
C7318	1-107-957-11	ELECT 1μF 20% 250V		R7306	1-260-099-11	CARBON 1K 5% 1/2W	
<CONNECTOR>				R7307	1-208-801-11	METAL CHIP 6.2K 0.5% 1/10W	
CN7301	*1-564-509-11	PLUG, CONNECTOR 6P		R7308	1-260-133-11	CARBON 680K 5% 1/2W	
CN7302	*1-564-512-11	PLUG, CONNECTOR 9P		R7309	1-208-790-11	METAL CHIP 2.2K 0.5% 1/10W	
CN7303	*1-564-512-11	PLUG, CONNECTOR 9P		R7310	1-216-295-91	SHORT 0	
CN7304	1-785-879-11	CONNECTOR, ONE TOUCH		R7311	1-208-808-11	METAL CHIP 12K 0.5% 1/10W	
CN7307	1-695-915-11	TAB (CONTACT)		R7312	1-216-660-11	METAL CHIP 2.4K 0.5% 1/10W	
<DIODE>				R7313	1-216-033-00	RES-CHIP 220 5% 1/10W	
D7302	8-719-921-86	DIODE MTZJ-13		R7314	1-249-424-11	CARBON 3.9K 5% 1/4W	
D7303	8-719-901-83	DIODE 1SS83		R7315	1-216-295-91	SHORT 0	
D7304	8-719-901-83	DIODE 1SS83		R7316	1-215-929-11	METAL OXIDE 100K 5% 3W	
D7305	8-719-901-83	DIODE 1SS83		R7317	1-260-093-11	CARBON 330 5% 1/2W	
D7306	8-719-901-83	DIODE 1SS83		R7318	1-216-295-91	SHORT 0	
D7307	8-719-988-61	DIODE 1SS355TE-17		R7319	1-208-798-11	METAL CHIP 4.7K 0.5% 1/10W	
D7308	8-719-921-88	DIODE MTZJ-13B		R7320	1-260-087-11	CARBON 100 5% 1/2W	
D7309	8-719-988-61	DIODE 1SS355TE-17		R7321	1-260-117-11	CARBON 33K 5% 1/2W	
D7311	8-719-921-86	DIODE MTZJ-13		R7322	1-208-782-11	METAL CHIP 1K 0.5% 1/10W	
D7312	8-719-921-86	DIODE MTZJ-13		R7323	1-216-025-91	RES-CHIP 100 5% 1/10W	
<IC>				R7324	1-216-295-91	SHORT 0	
IC7301	8-759-360-83	IC TDA6111Q/N4		R7326	1-208-803-11	METAL CHIP 7.5K 0.5% 1/10W	
<JACK>				R7327	1-208-798-11	METAL CHIP 4.7K 0.5% 1/10W	
J7301	Δ 1-251-182-41	SOCKET, PICTURE TUBE		R7328	1-216-073-00	RES-CHIP 10K 5% 1/10W	
				R7329	1-216-091-00	RES-CHIP 56K 5% 1/10W	
				R7330	1-216-081-00	RES-CHIP 22K 5% 1/10W	
				R7331	1-216-055-00	RES-CHIP 1.8K 5% 1/10W	
				R7332	1-216-081-00	RES-CHIP 22K 5% 1/10W	
				R7335	1-249-417-11	CARBON 1K 5% 1/4W	
				R7336	1-216-053-00	RES-CHIP 1.5K 5% 1/10W	



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
		<SPARK GAP>		C505	1-124-779-00	ELECT CHIP 10μF	20% 16V
SG7301	1-519-422-11	GAP, SPARK		C507	1-124-779-00	ELECT CHIP 10μF	20% 16V
SG7303	1-519-422-11	GAP, SPARK		C509	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
				C510	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
		<TEST PIN>		C511	1-163-038-91	CERAMIC CHIP 0.1μF	25V
TP7302	* 1-535-881-21	TERMINAL, TP (AUTO INSERTION)		C512	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
TP7304	* 1-535-881-21	TERMINAL, TP (AUTO INSERTION)		C514	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
*****				C515	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
				C516	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
		* A-1136-087-A B3 BOARD, COMPLETE		C517	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
		*****		C518	1-126-204-11	ELECT CHIP 47μF	20% 16V
				C519	1-163-038-91	CERAMIC CHIP 0.1μF	25V
		<CAPACITOR>		C520	1-163-038-91	CERAMIC CHIP 0.1μF	25V
				C521	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C302	1-117-136-11	ELECT CHIP 10μF	20% 6.3V	C522	1-163-038-91	CERAMIC CHIP 0.1μF	25V
C305	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C523	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C306	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C524	1-124-779-00	ELECT CHIP 10μF	20% 16V
C309	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C525	1-126-394-11	ELECT CHIP 10μF	20% 16V
C310	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C526	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C312	1-163-275-11	CERAMIC CHIP 0.001μF	5% 50V	C527	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C313	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C528	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C314	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C530	1-216-295-91	SHORT 0	
C315	1-163-251-11	CERAMIC CHIP 100pF	5% 50V	C532	1-216-295-91	SHORT 0	
C316	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C534	1-216-295-91	SHORT 0	
C317	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C538	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C318	1-124-779-00	ELECT CHIP 10μF	20% 16V	C539	1-126-204-11	ELECT CHIP 47μF	20% 16V
C319	1-126-394-11	ELECT CHIP 10μF	20% 16V	C540	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C320	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C542	1-126-204-11	ELECT CHIP 47μF	20% 16V
C321	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C543	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C323	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C545	1-126-396-11	ELECT CHIP 47μF	20% 16V
C324	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C546	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C325	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C548	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C327	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C549	1-126-204-11	ELECT CHIP 47μF	20% 16V
C330	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C550	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C331	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C551	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C332	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C554	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C333	1-216-295-91	SHORT 0		C555	1-163-038-91	CERAMIC CHIP 0.1μF	25V
C337	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C556	1-126-392-11	ELECT CHIP 100μF	20% 6.3V
C338	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C557	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C339	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C559	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C340	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C560	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C341	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C601	1-126-394-11	ELECT CHIP 10μF	20% 16V
C346	1-163-038-91	CERAMIC CHIP 0.1μF	25V	C602	1-126-394-11	ELECT CHIP 10μF	20% 16V
C347	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C603	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C349	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C604	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C350	1-126-396-11	ELECT CHIP 47μF	20% 16V	C605	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C353	1-126-204-11	ELECT CHIP 47μF	20% 16V	C606	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C354	1-117-136-11	ELECT CHIP 10μF	20% 6.3V	C607	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C355	1-117-136-11	ELECT CHIP 10μF	20% 6.3V	C608	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C361	1-124-779-00	ELECT CHIP 10μF	20% 16V	C609	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C362	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C610	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C363	1-163-017-00	CERAMIC CHIP 0.0047μF	10% 50V	C611	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C501	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C612	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C502	1-124-779-00	ELECT CHIP 10μF	20% 16V	C613	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C503	1-124-779-00	ELECT CHIP 10μF	20% 16V	C614	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
				C615	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
FL501	1-233-877-11	FILTER, LOW PASS				<COIL>	
FL502	1-233-504-21	FILTER, LOW PASS		L302	1-412-029-11	INDUCTOR CHIP	10μH
FL503	1-233-504-21	FILTER, LOW PASS		L303	1-412-029-11	INDUCTOR CHIP	10μH
FL504	1-234-177-21	FILTER, CHIP EMI		L501	1-412-026-11	INDUCTOR CHIP	1μH
FL505	1-234-177-21	FILTER, CHIP EMI		L502	1-412-026-11	INDUCTOR CHIP	1μH
FL506	1-234-177-21	FILTER, CHIP EMI		L503	1-412-026-11	INDUCTOR CHIP	1μH
FL508	1-234-177-21	FILTER, CHIP EMI		L504	1-412-026-11	INDUCTOR CHIP	1μH
FL509	1-234-177-21	FILTER, CHIP EMI		L505	1-412-029-11	INDUCTOR CHIP	10μH
FL510	1-234-177-21	FILTER, CHIP EMI		L506	1-412-026-11	INDUCTOR CHIP	1μH
FL511	1-234-177-21	FILTER, CHIP EMI		L508	1-412-029-11	INDUCTOR CHIP	10μH
FL512	1-234-177-21	FILTER, CHIP EMI		L509	1-412-029-11	INDUCTOR CHIP	10μH
FL601	1-234-177-21	FILTER, CHIP EMI		L511	1-412-026-11	INDUCTOR CHIP	1μH
FL602	1-234-177-21	FILTER, CHIP EMI		L512	1-412-026-11	INDUCTOR CHIP	1μH
FL603	1-234-177-21	FILTER, CHIP EMI		L604	1-412-029-11	INDUCTOR CHIP	10μH
FL606	1-239-560-11	FILTER, CHIP EMI		L605	1-412-029-11	INDUCTOR CHIP	10μH
FL801	1-234-177-21	FILTER, CHIP EMI				<TRANSISTOR>	
FL802	1-234-177-21	FILTER, CHIP EMI		Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL803	1-234-177-21	FILTER, CHIP EMI		Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL804	1-234-177-21	FILTER, CHIP EMI		Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL805	1-234-177-21	FILTER, CHIP EMI		Q501	8-729-216-22	TRANSISTOR 2SA1162-G	
FL806	1-234-177-21	FILTER, CHIP EMI		Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL807	1-234-177-21	FILTER, CHIP EMI		Q503	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL808	1-234-177-21	FILTER, CHIP EMI		Q510	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL810	1-234-177-21	FILTER, CHIP EMI		Q511	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL901	1-234-509-21	FILTER, LOW PASS		Q512	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL902	1-233-876-11	FILTER, LOW PASS		Q516	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL903	1-233-876-11	FILTER, LOW PASS		Q517	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FL904	1-234-177-21	FILTER, CHIP EMI		Q518	8-729-216-22	TRANSISTOR 2SA1162-G	
FL905	1-234-177-21	FILTER, CHIP EMI		Q519	1-801-806-11	TRANSISTOR DTC144EKA	
FL906	1-234-177-21	FILTER, CHIP EMI		Q520	1-801-806-11	TRANSISTOR DTC144EKA	
FL907	1-234-177-21	FILTER, CHIP EMI		Q521	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		<IC>		Q522	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC302	8-752-388-98	IC CXD2303AQ		Q523	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC303	8-752-088-27	IC CXA3266Q-T6		Q524	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC309	8-759-640-16	IC TC7SET04F(TE85R)		Q601	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC311	8-759-708-05	IC NJM78L05A		Q602	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC501	8-759-447-90	IC TLC5733AIPM		Q901	8-729-216-22	TRANSISTOR 2SA1162-G	
IC504	8-759-669-78	IC TLC2933IPWR-12		Q902	8-729-216-22	TRANSISTOR 2SA1162-G	
IC505	8-759-640-16	IC TC7SET04F(TE85R)		Q903	8-729-216-22	TRANSISTOR 2SA1162-G	
IC506	8-759-640-16	IC TC7SET04F(TE85R)		Q904	8-729-028-28	TRANSISTOR 2SK2036(TE85L)	
IC601	8-752-398-47	IC CXD2090Q		Q905	8-729-028-28	TRANSISTOR 2SK2036(TE85L)	
IC602	8-759-665-38	IC MB81F161622C-80FN		Q906	1-801-806-11	TRANSISTOR DTC144EKA	
IC603	8-759-669-75	IC TLC2932IPWR		Q907	8-729-216-22	TRANSISTOR 2SA1162-G	
IC604	8-752-072-94	IC CXA1875AM-T4		Q908	8-729-216-22	TRANSISTOR 2SA1162-G	
IC801	8-759-672-57	IC CXD9509AQ		Q909	8-729-216-22	TRANSISTOR 2SA1162-G	
IC802	8-759-595-53	IC MB81F643242B-10FN				<RESISTOR>	
IC803	8-759-460-29	IC PST9120NL		R302	1-216-013-00	RES-CHIP	33 5% 1/10W
IC901	8-752-369-84	IC CXD2309Q-T6		R303	1-208-798-11	METAL CHIP	4.7K 0.5% 1/10W
IC902	8-759-683-19	IC MB94918RPF-G124-BND		R305	1-216-049-91	RES-CHIP	1K 5% 1/10W
IC903	8-759-575-71	IC M24C04-WMN6T		R306	1-208-789-11	METAL CHIP	2K 0.5% 1/10W
IC904	8-759-349-11	IC PST9145NL		R309	1-216-009-91	RES-CHIP	22 5% 1/10W
				R310	1-216-009-91	RES-CHIP	22 5% 1/10W

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R311	1-216-009-91	RES-CHIP	22 5% 1/10W	R551	1-208-756-11	METAL CHIP	82 0.5% 1/10W
R313	1-216-009-91	RES-CHIP	22 5% 1/10W	R552	1-208-750-11	METAL CHIP	47 0.5% 1/10W
R316	1-216-009-91	RES-CHIP	22 5% 1/10W	R553	1-216-295-91	SHORT	0
R318	1-216-009-91	RES-CHIP	22 5% 1/10W				
R319	1-216-049-91	RES-CHIP	1K 5% 1/10W	R554	1-208-750-11	METAL CHIP	47 0.5% 1/10W
R321	1-216-009-91	RES-CHIP	22 5% 1/10W	R555	1-216-077-91	RES-CHIP	15K 5% 1/10W
R323	1-216-009-91	RES-CHIP	22 5% 1/10W	R557	1-216-049-91	RES-CHIP	1K 5% 1/10W
R324	1-216-009-91	RES-CHIP	22 5% 1/10W	R558	1-216-025-91	RES-CHIP	100 5% 1/10W
R325	1-216-073-00	RES-CHIP	10K 5% 1/10W	R559	1-216-077-91	RES-CHIP	15K 5% 1/10W
R328	1-216-025-91	RES-CHIP	100 5% 1/10W	R560	1-208-750-11	METAL CHIP	47 0.5% 1/10W
R330	1-216-037-00	RES-CHIP	330 5% 1/10W	R561	1-216-043-91	RES-CHIP	560 5% 1/10W
R331	1-216-033-00	RES-CHIP	220 5% 1/10W	R562	1-216-043-91	RES-CHIP	560 5% 1/10W
R332	1-216-037-00	RES-CHIP	330 5% 1/10W	R563	1-216-043-91	RES-CHIP	560 5% 1/10W
R333	1-216-295-91	SHORT	0	R571	1-216-295-91	SHORT	0
R335	1-216-013-00	RES-CHIP	33 5% 1/10W	R572	1-208-750-11	METAL CHIP	47 0.5% 1/10W
R336	1-216-013-00	RES-CHIP	33 5% 1/10W	R573	1-208-810-11	METAL CHIP	15K 0.5% 1/10W
R337	1-216-097-91	RES-CHIP	100K 5% 1/10W	R574	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R338	1-216-295-91	SHORT	0	R575	1-208-756-11	METAL CHIP	82 0.5% 1/10W
R339	1-216-295-91	SHORT	0	R576	1-208-756-11	METAL CHIP	82 0.5% 1/10W
R347	1-216-295-91	SHORT	0	R577	1-208-750-11	METAL CHIP	47 0.5% 1/10W
R350	1-216-295-91	SHORT	0	R578	1-208-750-11	METAL CHIP	47 0.5% 1/10W
R501	1-216-025-91	RES-CHIP	100 5% 1/10W	R579	1-216-077-91	RES-CHIP	15K 5% 1/10W
R502	1-216-025-91	RES-CHIP	100 5% 1/10W	R580	1-216-295-91	SHORT	0
R503	1-216-295-91	SHORT	0	R582	1-216-041-00	RES-CHIP	470 5% 1/10W
R504	1-216-295-91	SHORT	0	R584	1-216-041-00	RES-CHIP	470 5% 1/10W
R505	1-216-295-91	SHORT	0	R594	1-216-041-00	RES-CHIP	470 5% 1/10W
R506	1-216-009-91	RES-CHIP	22 5% 1/10W	R596	1-216-049-91	RES-CHIP	1K 5% 1/10W
R507	1-216-009-91	RES-CHIP	22 5% 1/10W	R597	1-216-073-00	RES-CHIP	10K 5% 1/10W
R508	1-216-025-91	RES-CHIP	100 5% 1/10W	R598	1-216-025-91	RES-CHIP	100 5% 1/10W
R509	1-216-025-91	RES-CHIP	100 5% 1/10W	R600	1-216-066-00	RES-CHIP	5.1K 5% 1/10W
R510	1-216-043-91	RES-CHIP	560 5% 1/10W	R601	1-216-073-00	RES-CHIP	10K 5% 1/10W
R511	1-216-043-91	RES-CHIP	560 5% 1/10W	R602	1-216-073-00	RES-CHIP	10K 5% 1/10W
R512	1-216-043-91	RES-CHIP	560 5% 1/10W	R603	1-216-073-00	RES-CHIP	10K 5% 1/10W
R513	1-216-043-91	RES-CHIP	560 5% 1/10W	R604	1-216-033-00	RES-CHIP	220 5% 1/10W
R514	1-216-043-91	RES-CHIP	560 5% 1/10W	R605	1-216-295-91	SHORT	0
R515	1-216-043-91	RES-CHIP	560 5% 1/10W	R608	1-216-295-91	SHORT	0
R516	1-216-049-91	RES-CHIP	1K 5% 1/10W	R609	1-216-073-00	RES-CHIP	10K 5% 1/10W
R517	1-216-049-91	RES-CHIP	1K 5% 1/10W	R610	1-216-033-00	RES-CHIP	220 5% 1/10W
R518	1-216-295-91	SHORT	0	R611	1-216-073-00	RES-CHIP	10K 5% 1/10W
R520	1-208-776-11	METAL CHIP	560 0.5% 1/10W	R612	1-216-073-00	RES-CHIP	10K 5% 1/10W
R521	1-216-295-91	SHORT	0	R613	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R523	1-208-776-11	METAL CHIP	560 0.5% 1/10W	R615	1-216-089-91	RES-CHIP	47K 5% 1/10W
R524	1-216-295-91	SHORT	0	R616	1-216-073-00	RES-CHIP	10K 5% 1/10W
R526	1-208-776-11	METAL CHIP	560 0.5% 1/10W	R617	1-216-295-91	SHORT	0
R528	1-216-037-00	RES-CHIP	330 5% 1/10W	R619	1-216-073-00	RES-CHIP	10K 5% 1/10W
R529	1-208-800-11	METAL CHIP	5.6K 0.5% 1/10W	R621	1-216-295-91	SHORT	0
R530	1-208-800-11	METAL CHIP	5.6K 0.5% 1/10W	R622	1-216-295-91	SHORT	0
R531	1-216-031-00	RES-CHIP	180 5% 1/10W	R623	1-216-295-91	SHORT	0
R532	1-208-800-11	METAL CHIP	5.6K 0.5% 1/10W	R624	1-216-295-91	SHORT	0
R533	1-216-031-00	RES-CHIP	180 5% 1/10W	R625	1-216-295-91	SHORT	0
R536	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R626	1-216-073-00	RES-CHIP	10K 5% 1/10W
R537	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W	R628	1-216-295-91	SHORT	0
R540	1-216-049-91	RES-CHIP	1K 5% 1/10W	R629	1-216-073-00	RES-CHIP	10K 5% 1/10W
R548	1-208-750-11	METAL CHIP	47 0.5% 1/10W	R631	1-216-295-91	SHORT	0
R549	1-208-750-11	METAL CHIP	47 0.5% 1/10W	R634	1-216-295-91	SHORT	0
R550	1-208-756-11	METAL CHIP	82 0.5% 1/10W	R635	1-216-295-91	SHORT	0
				R638	1-216-295-91	SHORT	0

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R639	1-216-017-91	RES-CHIP	47	5%	1/10W	R814	1-216-073-00 RES-CHIP 10K 5% 1/10W
R640	1-216-009-91	RES-CHIP	22	5%	1/10W	R815	1-216-073-00 RES-CHIP 10K 5% 1/10W
R642	1-216-295-91	SHORT	0			R816	1-216-073-00 RES-CHIP 10K 5% 1/10W
R643	1-216-295-91	SHORT	0			R817	1-211-962-11 METAL CHIP 27 0.5% 1/10W
R645	1-216-295-91	SHORT	0			R819	1-216-295-91 SHORT 0
R651	1-216-295-91	SHORT	0			R820	1-216-295-91 SHORT 0
R653	1-216-025-91	RES-CHIP	100	5%	1/10W	R823	1-216-073-00 RES-CHIP 10K 5% 1/10W
R654	1-216-033-00	RES-CHIP	220	5%	1/10W	R824	1-216-073-00 RES-CHIP 10K 5% 1/10W
R655	1-216-295-91	SHORT	0			R825	1-208-752-11 METAL CHIP 56 0.5% 1/10W
R657	1-216-009-91	RES-CHIP	22	5%	1/10W	R826	1-208-772-11 METAL CHIP 390 0.5% 1/10W
R658	1-216-049-91	RES-CHIP	1K	5%	1/10W	R827	1-216-607-11 METAL CHIP 15 0.5% 1/10W
R659	1-216-025-91	RES-CHIP	100	5%	1/10W	R834	1-208-760-11 METAL CHIP 120 0.5% 1/10W
R660	1-216-025-91	RES-CHIP	100	5%	1/10W	R835	1-208-754-11 METAL CHIP 68 0.5% 1/10W
R661	1-216-025-91	RES-CHIP	100	5%	1/10W	R836	1-211-960-11 METAL CHIP 22 0.5% 1/10W
R664	1-216-009-91	RES-CHIP	22	5%	1/10W	R838	1-216-295-91 SHORT 0
R665	1-216-035-00	RES-CHIP	270	5%	1/10W	R840	1-216-295-91 SHORT 0
R666	1-216-646-11	METAL CHIP	620	0.5%	1/10W	R844	1-216-009-91 RES-CHIP 22 5% 1/10W
R667	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W	R845	1-216-009-91 RES-CHIP 22 5% 1/10W
R668	1-216-009-91	RES-CHIP	22	5%	1/10W	R846	1-216-009-91 RES-CHIP 22 5% 1/10W
R670	1-216-295-91	SHORT	0			R847	1-216-009-91 RES-CHIP 22 5% 1/10W
R671	1-216-073-00	RES-CHIP	10K	5%	1/10W	R848	1-216-009-91 RES-CHIP 22 5% 1/10W
R672	1-216-073-00	RES-CHIP	10K	5%	1/10W	R849	1-216-009-91 RES-CHIP 22 5% 1/10W
R673	1-216-073-00	RES-CHIP	10K	5%	1/10W	R850	1-216-009-91 RES-CHIP 22 5% 1/10W
R674	1-216-073-00	RES-CHIP	10K	5%	1/10W	R851	1-216-009-91 RES-CHIP 22 5% 1/10W
R675	1-216-073-00	RES-CHIP	10K	5%	1/10W	R852	1-216-009-91 RES-CHIP 22 5% 1/10W
R676	1-216-073-00	RES-CHIP	10K	5%	1/10W	R853	1-216-009-91 RES-CHIP 22 5% 1/10W
R677	1-216-073-00	RES-CHIP	10K	5%	1/10W	R854	1-216-009-91 RES-CHIP 22 5% 1/10W
R678	1-216-073-00	RES-CHIP	10K	5%	1/10W	R855	1-216-009-91 RES-CHIP 22 5% 1/10W
R679	1-216-073-00	RES-CHIP	10K	5%	1/10W	R856	1-216-009-91 RES-CHIP 22 5% 1/10W
R680	1-216-073-00	RES-CHIP	10K	5%	1/10W	R857	1-216-009-91 RES-CHIP 22 5% 1/10W
R681	1-216-073-00	RES-CHIP	10K	5%	1/10W	R858	1-216-009-91 RES-CHIP 22 5% 1/10W
R682	1-216-073-00	RES-CHIP	10K	5%	1/10W	R859	1-216-009-91 RES-CHIP 22 5% 1/10W
R683	1-216-073-00	RES-CHIP	10K	5%	1/10W	R860	1-216-009-91 RES-CHIP 22 5% 1/10W
R684	1-216-073-00	RES-CHIP	10K	5%	1/10W	R861	1-216-009-91 RES-CHIP 22 5% 1/10W
R685	1-216-073-00	RES-CHIP	10K	5%	1/10W	R862	1-216-009-91 RES-CHIP 22 5% 1/10W
R686	1-216-073-00	RES-CHIP	10K	5%	1/10W	R863	1-216-009-91 RES-CHIP 22 5% 1/10W
R687	1-216-295-91	SHORT	0			R864	1-216-009-91 RES-CHIP 22 5% 1/10W
R688	1-216-061-00	RES-CHIP	3.3K	5%	1/10W	R865	1-216-009-91 RES-CHIP 22 5% 1/10W
R689	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R866	1-216-009-91 RES-CHIP 22 5% 1/10W
R690	1-216-295-91	SHORT	0			R867	1-216-009-91 RES-CHIP 22 5% 1/10W
R691	1-216-061-00	RES-CHIP	3.3K	5%	1/10W	R868	1-216-009-91 RES-CHIP 22 5% 1/10W
R692	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R869	1-216-009-91 RES-CHIP 22 5% 1/10W
R693	1-216-009-91	RES-CHIP	22	5%	1/10W	R870	1-216-009-91 RES-CHIP 22 5% 1/10W
R694	1-216-295-91	SHORT	0			R871	1-216-009-91 RES-CHIP 22 5% 1/10W
R695	1-216-047-91	RES-CHIP	820	5%	1/10W	R872	1-216-009-91 RES-CHIP 22 5% 1/10W
R696	1-216-049-91	RES-CHIP	1K	5%	1/10W	R873	1-216-009-91 RES-CHIP 22 5% 1/10W
R697	1-216-117-00	RES-CHIP	680K	5%	1/10W	R874	1-216-009-91 RES-CHIP 22 5% 1/10W
R698	1-216-117-00	RES-CHIP	680K	5%	1/10W	R875	1-216-009-91 RES-CHIP 22 5% 1/10W
R699	1-216-295-91	SHORT	0			R876	1-216-009-91 RES-CHIP 22 5% 1/10W
R801	1-216-009-91	RES-CHIP	22	5%	1/10W	R877	1-216-009-91 RES-CHIP 22 5% 1/10W
R802	1-216-009-91	RES-CHIP	22	5%	1/10W	R878	1-216-009-91 RES-CHIP 22 5% 1/10W
R804	1-216-073-00	RES-CHIP	10K	5%	1/10W	R879	1-216-009-91 RES-CHIP 22 5% 1/10W
R806	1-208-806-11	METAL CHIP	10K	0.5%	1/10W	R880	1-216-009-91 RES-CHIP 22 5% 1/10W
R807	1-208-768-11	METAL CHIP	270	0.5%	1/10W	R881	1-216-009-91 RES-CHIP 22 5% 1/10W
R812	1-216-073-00	RES-CHIP	10K	5%	1/10W	R882	1-216-009-91 RES-CHIP 22 5% 1/10W
R813	1-216-295-91	SHORT	0			R883	1-216-009-91 RES-CHIP 22 5% 1/10W

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
RB017	1-239-621-11	NETWORK RESISTOR (CHIP) 22		C1204	1-115-419-11	CERAMIC CHIP 3300pF	5% 25V
RB018	1-239-621-11	NETWORK RESISTOR (CHIP) 22		C1205	1-115-419-11	CERAMIC CHIP 3300pF	5% 25V
RB019	1-239-409-11	NETWORK RESISTOR (CHIP) 47		C1206	1-164-492-11	CERAMIC CHIP 0.15μF	10% 16V
RB020	1-239-409-11	NETWORK RESISTOR (CHIP) 47					
RB021	1-239-409-11	NETWORK RESISTOR (CHIP) 47		C1208	1-107-725-11	CERAMIC CHIP 0.1μF	10% 16V
RB022	1-239-409-11	NETWORK RESISTOR (CHIP) 47		C1209	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V
RB023	1-239-409-11	NETWORK RESISTOR (CHIP) 47		C1210	1-164-492-11	CERAMIC CHIP 0.15μF	10% 16V
RB024	1-239-409-11	NETWORK RESISTOR (CHIP) 47		C1211	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V
RB025	1-239-409-11	NETWORK RESISTOR (CHIP) 47		C1213	1-107-725-11	CERAMIC CHIP 0.1μF	10% 16V
RB026	1-239-409-11	NETWORK RESISTOR (CHIP) 47					
RB027	1-239-409-11	NETWORK RESISTOR (CHIP) 47		C1215	1-164-505-11	CERAMIC CHIP 2.2μF	16V
RB301	1-239-621-11	NETWORK RESISTOR (CHIP) 22		C1217	1-164-505-11	CERAMIC CHIP 2.2μF	16V
RB302	1-239-621-11	NETWORK RESISTOR (CHIP) 22		C1219	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
RB701	1-239-711-91	NETWORK RESISTOR (CHIP) 0		C1220	1-107-715-11	ELECT 22μF	20% 16V
				C1221	1-137-150-11	MYLAR 0.01μF	5% 50V
RB702	1-239-711-91	NETWORK RESISTOR (CHIP) 0					
RB703	1-239-711-91	NETWORK RESISTOR (CHIP) 0		C1222	1-126-962-11	ELECT 3.3μF	20% 50V
RB704	1-239-711-91	NETWORK RESISTOR (CHIP) 0		C1223	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
RB705	1-239-711-91	NETWORK RESISTOR (CHIP) 0		C1224	1-126-933-11	ELECT 100μF	20% 16V
RB706	1-239-711-91	NETWORK RESISTOR (CHIP) 0		C1225	1-126-933-11	ELECT 100μF	20% 16V
				C1226	1-126-933-11	ELECT 100μF	20% 16V
		<CRYSTAL>		C1227	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
X801	1-781-649-21	OSCILLATOR, CRYSTAL (54MHZ)		C1228	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
X802	1-781-650-21	VIBRATOR, CRYSTAL (17.28MHZ)		C1229	1-126-767-11	ELECT 1000μF	20% 16V
X901	1-760-014-11	VIBRATOR, CERAMIC (20MHZ)		C1230	1-126-933-11	ELECT 100μF	20% 16V
		*****		C1231	1-107-725-11	CERAMIC CHIP 0.1μF	10% 16V
		* A-1299-176-A A1 BOARD, COMPLETE		C1310	1-115-339-11	CERAMIC CHIP 0.1μF	10% 50V
		*****		C1311	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
				C1312	1-104-664-11	ELECT 47μF	20% 16V
		* 1-555-110-00 CABLE, PIN		C1314	1-126-933-11	ELECT 100μF	20% 16V
		4-382-854-11 SCREW (M3X10), P, SW (+)		C1315	1-107-725-11	CERAMIC CHIP 0.1μF	10% 16V
		(IC1601, IC1602, IC1603, IC1604, IC1605)					
		4-389-026-11 SHEET, BN (IC1604)		C1316	1-126-933-11	ELECT 100μF	20% 16V
				C1317	1-163-005-11	CERAMIC CHIP 470pF	10% 50V
		<COMFILTER MODULE>		C1321	1-126-933-11	ELECT 100μF	20% 16V
BC4	1-772-694-11	3D COMFILTER MODULE, DIGITAL		C1323	1-107-725-11	CERAMIC CHIP 0.1μF	10% 16V
				C1324	1-163-005-11	CERAMIC CHIP 470pF	10% 50V
		<CAPACITOR>					
C1101	1-126-935-11	ELECT 470μF	20% 16V	C1325	1-126-933-11	ELECT 100μF	20% 16V
C1102	1-126-964-11	ELECT 10μF	20% 50V	C1326	1-126-933-11	ELECT 100μF	20% 16V
C1103	1-126-960-11	ELECT 1μF	20% 50V	C1327	1-104-665-11	ELECT 100μF	20% 25V
C1104	1-126-960-11	ELECT 1μF	20% 50V	C1328	1-126-967-11	ELECT 47μF	20% 50V
C1105	1-126-041-11	ELECT 2200μF	20% 35V	C1329	1-163-005-11	CERAMIC CHIP 470pF	10% 50V
C1106	1-136-165-00	MYLAR 0.1μF	5% 50V	C1330	1-163-005-11	CERAMIC CHIP 470pF	10% 50V
C1107	1-136-165-00	MYLAR 0.1μF	5% 50V	C1331	1-163-005-11	CERAMIC CHIP 470pF	10% 50V
C1108	1-104-664-11	ELECT 47μF	20% 16V	C1332	1-126-967-11	ELECT 47μF	20% 50V
C1109	1-104-664-11	ELECT 47μF	20% 16V	C1333	1-104-665-11	ELECT 100μF	20% 25V
C1110	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C1334	1-126-933-11	ELECT 100μF	20% 16V
C1111	1-126-041-11	ELECT 2200μF	20% 35V	C1335	1-163-005-11	CERAMIC CHIP 470pF	10% 50V
C1114	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C1336	1-163-005-11	CERAMIC CHIP 470pF	10% 50V
C1116	1-126-933-11	ELECT 100μF	20% 16V	C1337	1-163-005-11	CERAMIC CHIP 470pF	10% 50V
C1117	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C1401	1-164-346-11	CERAMIC CHIP 1μF	16V
C1201	1-107-725-11	CERAMIC CHIP 0.1μF	10% 16V	C1601	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C1202	1-126-934-11	ELECT 220μF	20% 16V	C1602	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C1203	1-126-965-11	ELECT 22μF	20% 50V	C1603	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
				C1604	1-126-933-11	ELECT 100μF	20% 16V
				C1605	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
				C1606	1-126-933-11	ELECT 100μF	20% 16V
				C1607	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
				C1608	1-126-933-11	ELECT 100μF	20% 16V
				C1610	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V

KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1 RM-961

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1611	1-126-916-11	ELECT	1000μF 20% 6.3V	D1406	8-719-914-43	DIODE DAN202K	
C1612	1-126-925-11	ELECT	470μF 20% 10V	D1409	8-719-422-12	DIODE MA8039	
C1615	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	D1410	8-719-402-92	DIODE MA3220M-TX	
C1616	1-126-916-11	ELECT	1000μF 20% 6.3V	D1411	8-719-402-92	DIODE MA3220M-TX	
C1617	1-126-925-11	ELECT	470μF 20% 10V	D1412	8-719-988-61	DIODE 1SS355TE-17	
C1619	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V				
<CONNECTOR>				<FERRITBEAD>			
CN1001	1-695-299-11	CONNECTOR, BOARD TO BOARD	50P	FB1301	1-216-295-91	SHORT	0
CN1102	*1-564-507-11	PLUG, CONNECTOR	4P				
CN1201	1-695-299-11	CONNECTOR, BOARD TO BOARD	50P	<IC>			
CN1301	*1-564-508-11	PLUG, CONNECTOR	5P	IC1101	8-759-190-89	IC TDA7265	
CN1302	*1-764-333-11	PLUG, CONNECTOR	10P	IC1201	8-759-273-12	IC TDA7315D013TR	
CN1404	1-695-298-11	CONNECTOR, BOARD TO BOARD	40P	IC1202	8-759-576-76	IC TDA2822D013TR	
CN1501	1-785-802-11	PIN, CONNECTOR (WITH PWB)	20P	IC1301	8-759-042-02	IC S-80743AL-A7-S	
CN1502	1-785-802-11	PIN, CONNECTOR (WITH PWB)	20P	IC1601	8-759-069-28	IC PQ05RF11	
CN1503	*1-564-511-11	PLUG, CONNECTOR	8P	IC1602	8-759-095-63	IC PQ09RF2	
CN1504	*1-564-508-11	PLUG, CONNECTOR	5P	IC1603	8-759-520-49	IC PQ30RV21	
CN1603	*1-764-333-11	PLUG, CONNECTOR	10P	IC1604	8-759-644-37	IC PQ5EV3	
CN1605	*1-508-765-00	PIN, CONNECTOR (5MM PITCH)	3P	IC1605	8-759-069-28	IC PQ05RF11	
CN1606	*1-564-508-11	PLUG, CONNECTOR	5P	<CHIP CONDUCTOR>			
CN1661	1-695-915-11	TAB (CONTACT)		JR1001	1-216-295-91	SHORT	0
CN1665	1-695-915-11	TAB (CONTACT)		JR1002	1-216-295-91	SHORT	0
CN1666	1-695-915-11	TAB (CONTACT)		JR1003	1-216-295-91	SHORT	0
CN1801	1-695-299-11	CONNECTOR, BOARD TO BOARD	50P	JR1004	1-216-295-91	SHORT	0
<COMPOSITION CIRCUIT BLOCK>				JR1005	1-216-295-91	SHORT	0
CP1302	1-251-658-31	SPLITTER RF		JR1006	1-216-295-91	SHORT	0
<DIODE>				JR1007	1-216-295-91	SHORT	0
D1101	8-719-988-61	DIODE 1SS355TE-17		JR1008	1-216-295-91	SHORT	0
D1102	8-719-988-61	DIODE 1SS355TE-17		JR1009	1-216-295-91	SHORT	0
D1103	8-719-988-61	DIODE 1SS355TE-17		JR1010	1-216-295-91	SHORT	0
D1104	8-719-988-61	DIODE 1SS355TE-17		JR1011	1-216-295-91	SHORT	0
D1105	8-719-914-43	DIODE DAN202K		JR1013	1-216-295-91	SHORT	0
D1106	8-719-914-43	DIODE DAN202K		JR1014	1-216-295-91	SHORT	0
D1107	8-719-402-92	DIODE MA3220M-TX		JR1015	1-216-295-91	SHORT	0
D1108	8-719-988-61	DIODE 1SS355TE-17		JR1016	1-216-295-91	SHORT	0
D1109	8-719-988-61	DIODE 1SS355TE-17		JR1017	1-216-295-91	SHORT	0
D1110	8-719-402-92	DIODE MA3220M-TX		JR1018	1-216-295-91	SHORT	0
D1111	8-719-402-92	DIODE MA3220M-TX		JR1019	1-216-295-91	SHORT	0
D1112	8-719-402-92	DIODE MA3220M-TX		JR1020	1-216-295-91	SHORT	0
D1201	8-719-988-61	DIODE 1SS355TE-17		JR1023	1-216-295-91	SHORT	0
D1202	8-719-914-43	DIODE DAN202K		JR1028	1-216-295-91	SHORT	0
D1204	8-719-914-43	DIODE DAN202K		JR1031	1-216-295-91	SHORT	0
D1205	8-719-988-61	DIODE 1SS355TE-17		JR1032	1-216-295-91	SHORT	0
D1206	8-719-056-72	DIODE UDZ-TE-17-2.4B		JR1033	1-216-295-91	SHORT	0
D1301	8-719-073-01	DIODE MA111-(K8).S0		JR1034	1-216-295-91	SHORT	0
D1401	8-719-056-82	DIODE UDZ-TE-17-6.2B		JR1035	1-216-295-91	SHORT	0
D1402	8-719-056-82	DIODE UDZ-TE-17-6.2B		JR1201	1-216-295-91	SHORT	0
D1403	8-719-056-82	DIODE UDZ-TE-17-6.2B		JR1202	1-216-295-91	SHORT	0
D1404	8-719-056-82	DIODE UDZ-TE-17-6.2B		JR1303	1-216-295-91	SHORT	0
D1405	8-719-056-83	DIODE UDZ-TE-17-6.8B		JR1305	1-216-295-91	SHORT	0
				JR1306	1-216-295-91	SHORT	0
				JR1601	1-216-295-91	SHORT	0

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
JR1603	1-216-295-91	SHORT	0	R1112	1-216-295-91	SHORT	0
JR1604	1-414-193-41	INDUCTOR	220μH	R1113	1-216-061-00	RES-CHIP	3.3K 5% 1/10W
				R1114	1-216-089-91	RES-CHIP	47K 5% 1/10W
				R1115	1-216-089-91	RES-CHIP	47K 5% 1/10W
	<COIL>						
L1304	1-414-856-11	INDUCTOR	10μH	R1116	1-216-295-91	SHORT	0
L1305	1-414-856-11	INDUCTOR	10μH	R1117	1-216-061-00	RES-CHIP	3.3K 5% 1/10W
L1306	1-414-856-11	INDUCTOR	10μH	R1118	1-216-079-00	RES-CHIP	18K 5% 1/10W
L1307	1-414-856-11	INDUCTOR	10μH	R1119	1-216-079-00	RES-CHIP	18K 5% 1/10W
L1308	1-414-856-11	INDUCTOR	10μH	R1120	1-216-043-91	RES-CHIP	560 5% 1/10W
L1309	1-414-856-11	INDUCTOR	10μH	R1121	1-216-043-91	RES-CHIP	560 5% 1/10W
L1310	1-414-856-11	INDUCTOR	10μH	R1122	1-216-357-00	METAL OXIDE	4.7 5% 1W
L1311	1-414-856-11	INDUCTOR	10μH	R1123	1-249-381-11	CARBON	1 5% 1/4W
L1312	1-414-856-11	INDUCTOR	10μH	R1124	1-216-357-00	METAL OXIDE	4.7 5% 1W
L1313	1-414-856-11	INDUCTOR	10μH	R1126	1-216-073-00	RES-CHIP	10K 5% 1/10W
L1314	1-414-856-11	INDUCTOR	10μH	R1127	1-216-073-00	RES-CHIP	10K 5% 1/10W
				R1128	1-216-049-91	RES-CHIP	1K 5% 1/10W
	<TRANSISTOR>			R1130	1-216-089-91	RES-CHIP	47K 5% 1/10W
				R1131	1-216-089-91	RES-CHIP	47K 5% 1/10W
				R1201	1-216-033-00	RES-CHIP	220 5% 1/10W
Q1101	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1202	1-216-033-00	RES-CHIP	220 5% 1/10W
Q1102	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R1203	1-216-033-00	RES-CHIP	220 5% 1/10W
Q1103	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1204	1-216-033-00	RES-CHIP	220 5% 1/10W
Q1104	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1206	1-216-067-00	RES-CHIP	5.6K 5% 1/10W
Q1105	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1207	1-216-295-91	SHORT	0
Q1106	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R1209	1-216-067-00	RES-CHIP	5.6K 5% 1/10W
Q1201	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R1210	1-216-295-91	SHORT	0
Q1202	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1211	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
Q1203	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R1212	1-216-089-91	RES-CHIP	47K 5% 1/10W
Q1204	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1213	1-216-089-91	RES-CHIP	47K 5% 1/10W
Q1205	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1214	1-216-073-00	RES-CHIP	10K 5% 1/10W
Q1206	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1215	1-216-067-00	RES-CHIP	5.6K 5% 1/10W
Q1207	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1216	1-216-097-91	RES-CHIP	100K 5% 1/10W
Q1208	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1217	1-216-097-91	RES-CHIP	100K 5% 1/10W
Q1209	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R1218	1-216-089-91	RES-CHIP	47K 5% 1/10W
Q1308	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R1219	1-216-073-00	RES-CHIP	10K 5% 1/10W
Q1309	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R1220	1-216-089-91	RES-CHIP	47K 5% 1/10W
Q1310	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1221	1-216-073-00	RES-CHIP	10K 5% 1/10W
Q1311	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R1222	1-216-081-00	RES-CHIP	22K 5% 1/10W
Q1312	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1223	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
Q1401	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R1224	1-216-081-00	RES-CHIP	22K 5% 1/10W
Q1402	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1225	1-216-033-00	RES-CHIP	220 5% 1/10W
Q1409	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R1226	1-216-033-00	RES-CHIP	220 5% 1/10W
				R1228	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
				R1229	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
	<RESISTOR>						
				R1230	1-216-308-00	RES-CHIP	4.7 5% 1/10W
R1101	1-216-081-00	RES-CHIP	22K 5% 1/10W	R1231	1-216-295-91	SHORT	0
R1102	1-216-097-91	RES-CHIP	100K 5% 1/10W	R1232	1-216-295-91	SHORT	0
R1103	1-249-377-11	CARBON	0.47 5% 1/4W	R1233	1-216-295-91	SHORT	0
R1104	1-216-089-91	RES-CHIP	47K 5% 1/10W	R1234	1-216-295-91	SHORT	0
R1105	1-216-113-00	RES-CHIP	470K 5% 1/10W				
				R1235	1-216-081-00	RES-CHIP	22K 5% 1/10W
R1106	1-216-089-91	RES-CHIP	47K 5% 1/10W	R1236	1-216-089-91	RES-CHIP	47K 5% 1/10W
R1107	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R1237	1-216-081-00	RES-CHIP	22K 5% 1/10W
R1108	1-216-073-00	RES-CHIP	10K 5% 1/10W	R1249	1-216-308-00	RES-CHIP	4.7 5% 1/10W
R1109	1-216-041-00	RES-CHIP	470 5% 1/10W	R1329	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R1110	1-216-073-00	RES-CHIP	10K 5% 1/10W				
				R1330	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R1111	1-216-041-00	RES-CHIP	470 5% 1/10W	R1331	1-216-065-91	RES-CHIP	4.7K 5% 1/10W

A1 **M1**

The components identified by shading
and mark $\triangle$ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R1332	1-216-043-91	RES-CHIP	560 5% 1/10W	* A-1306-588-A M1 BOARD, COMPLETE *****			
R1333	1-216-039-00	RES-CHIP	390 5% 1/10W				
R1334	1-216-025-91	RES-CHIP	100 5% 1/10W				
R1335	1-216-049-91	RES-CHIP	1K 5% 1/10W	<CAPACITOR>			
R1336	1-216-025-91	RES-CHIP	100 5% 1/10W	C001	1-126-960-11	ELECT 1μF	20% 50V
R1337	1-216-017-91	RES-CHIP	47 5% 1/10W	C002	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R1338	1-216-295-91	SHORT	0	C003	1-163-037-11	CERAMIC CHIP 0.022μF	10% 50V
R1341	1-216-025-91	RES-CHIP	100 5% 1/10W	C004	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R1342	1-216-295-91	SHORT	0	C007	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R1344	1-216-043-91	RES-CHIP	560 5% 1/10W	C010	1-126-933-11	ELECT 100μF	20% 16V
R1345	1-216-039-00	RES-CHIP	390 5% 1/10W	C013	1-163-989-11	CERAMIC CHIP 0.033μF	10% 25V
R1346	1-216-073-00	RES-CHIP	10K 5% 1/10W	C014	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
R1347	1-216-025-91	RES-CHIP	100 5% 1/10W	C015	1-163-239-11	CERAMIC CHIP 33pF	5% 50V
R1348	1-216-025-91	RES-CHIP	100 5% 1/10W	C016	1-163-239-11	CERAMIC CHIP 33pF	5% 50V
R1349	1-216-025-91	RES-CHIP	100 5% 1/10W	C017	1-163-227-11	CERAMIC CHIP 10pF	0.50pF 50V
R1350	1-216-025-91	RES-CHIP	100 5% 1/10W	C018	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
R1351	1-216-017-91	RES-CHIP	47 5% 1/10W	C019	1-163-243-11	CERAMIC CHIP 47pF	5% 50V
R1352	1-216-049-91	RES-CHIP	1K 5% 1/10W	C020	1-163-245-11	CERAMIC CHIP 56pF	5% 50V
R1402	1-216-081-00	RES-CHIP	22K 5% 1/10W	C021	1-163-227-11	CERAMIC CHIP 10pF	0.50pF 50V
R1403	1-208-782-11	METAL CHIP	1K 0.5% 1/10W	C022	1-163-227-11	CERAMIC CHIP 10pF	0.50pF 50V
R1404	1-216-025-91	RES-CHIP	100 5% 1/10W	C023	1-126-967-11	ELECT 47μF	20% 50V
R1405	1-208-826-11	METAL CHIP	68K 0.5% 1/10W	C024	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
R1406	1-208-822-11	METAL CHIP	47K 0.5% 1/10W	C025	1-126-933-11	ELECT 100μF	20% 16V
R1407	1-208-817-11	METAL CHIP	30K 0.5% 1/10W	C026	1-163-009-11	CERAMIC CHIP 0.001μF	10% 50V
R1408	1-208-798-11	METAL CHIP	4.7K 0.5% 1/10W	C027	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
R1409	1-216-081-00	RES-CHIP	22K 5% 1/10W	C028	1-126-933-11	ELECT 100μF	20% 16V
R1436	1-216-295-91	SHORT	0	C030	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
R1437	1-216-295-91	SHORT	0	C032	1-126-933-11	ELECT 100μF	20% 16V
R1438	1-216-295-91	SHORT	0	C033	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R1439	1-216-295-91	SHORT	0	C034	1-163-243-11	CERAMIC CHIP 47pF	5% 50V
R1440	1-216-295-91	SHORT	0	C035	1-163-001-11	CERAMIC CHIP 220pF	10% 50V
R1441	1-216-295-91	SHORT	0	C036	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
R1452	1-216-295-91	SHORT	0	C037	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
R1453	1-216-295-91	SHORT	0	C038	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
R1460	1-216-049-91	RES-CHIP	1K 5% 1/10W	C039	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
R1461	1-216-073-00	RES-CHIP	10K 5% 1/10W	C040	1-164-005-11	CERAMIC CHIP 0.47μF	25V
R1462	1-216-073-00	RES-CHIP	10K 5% 1/10W	C041	1-163-001-11	CERAMIC CHIP 220pF	10% 50V
R1601	1-216-295-91	SHORT	0	C042	1-163-001-11	CERAMIC CHIP 220pF	10% 50V
R1608	1-208-778-11	METAL CHIP	680 0.5% 1/10W	C043	1-126-933-11	ELECT 100μF	20% 16V
R1610	1-208-772-11	METAL CHIP	390 0.5% 1/10W	C045	1-104-665-11	ELECT 100μF	20% 25V
R1611	1-208-772-11	METAL CHIP	390 0.5% 1/10W	C046	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R1613	1-208-772-11	METAL CHIP	390 0.5% 1/10W	C048	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
<RELAY>				C049	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
RY1101	1-755-028-11	RELAY		C050	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
RY1102	1-755-028-11	RELAY		C051	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
<TUNER>				C052	1-163-038-91	CERAMIC CHIP 0.1μF	25V
TU1303 $\triangle$	8-598-508-10	TUNER, FSS BTF-LG436		C054	1-126-933-11	ELECT 100μF	20% 16V
TU1304 $\triangle$	8-598-452-20	TUNER, FSS BTF-WG442		C055	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
*****				C056	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
				C059	1-163-038-91	CERAMIC CHIP 0.1μF	25V
				C060	1-163-038-91	CERAMIC CHIP 0.1μF	25V
				C061	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
				C062	1-163-259-91	CERAMIC CHIP 220pF	5% 50V



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
		<CONNECTOR>		L006	1-408-603-31	INDUCTOR 10μH	
CN001	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P				<TRANSISTOR>	
		<DIODE>		Q004	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
D003	8-719-988-61	DIODE 1SS355TE-17		Q005	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D004	8-719-988-61	DIODE 1SS355TE-17		Q006	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D007	8-719-988-61	DIODE 1SS355TE-17		Q008	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
D008	8-719-988-61	DIODE 1SS355TE-17		Q009	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
D009	8-719-988-61	DIODE 1SS355TE-17					
D015	8-719-988-61	DIODE 1SS355TE-17		Q010	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
D017	8-719-988-61	DIODE 1SS355TE-17		Q014	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		<FERRITBEAD>		Q015	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FB001	1-414-233-22	INDUCTOR CHIP 0μH		Q016	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
FB002	1-414-233-22	INDUCTOR CHIP 0μH		Q017	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
FB003	1-414-233-22	INDUCTOR CHIP 0μH		Q018	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
FB004	1-414-233-22	INDUCTOR CHIP 0μH		Q019	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
FB005	1-414-233-22	INDUCTOR CHIP 0μH		Q020	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
				Q021	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
FB006	1-414-233-22	INDUCTOR CHIP 0μH		Q022	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FB007	1-414-233-22	INDUCTOR CHIP 0μH		Q023	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FB008	1-414-233-22	INDUCTOR CHIP 0μH				<RESISTOR>	
FB009	1-414-233-22	INDUCTOR CHIP 0μH		R001	1-216-073-00	RES-CHIP 10K 5% 1/10W	
FB010	1-414-233-22	INDUCTOR CHIP 0μH		R002	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
				R003	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
FB011	1-414-233-22	INDUCTOR CHIP 0μH		R004	1-216-025-91	RES-CHIP 100 5% 1/10W	
FB012	1-414-233-22	INDUCTOR CHIP 0μH		R005	1-216-025-91	RES-CHIP 100 5% 1/10W	
		<FILTER>		R006	1-216-025-91	RES-CHIP 100 5% 1/10W	
FL001	1-236-071-11	ENCAPSULATED COMPONENT		R007	1-216-025-91	RES-CHIP 100 5% 1/10W	
		<IC>		R008	1-216-025-91	RES-CHIP 100 5% 1/10W	
IC001	8-759-042-02	IC S-80743AL-A7-S		R009	1-216-025-91	RES-CHIP 100 5% 1/10W	
IC002	8-752-916-27	IC CXP750096-025Q-TL		R011	1-216-025-91	RES-CHIP 100 5% 1/10W	
IC003	8-759-652-13	IC SDA5254-2B006		R012	1-216-025-91	RES-CHIP 100 5% 1/10W	
IC004	8-759-675-64	IC M24C08-MN6T(A)		R013	1-216-025-91	RES-CHIP 100 5% 1/10W	
IC005	8-759-671-94	IC MC74HC4053AFEL		R015	1-216-295-91	SHORT 0	
				R021	1-216-025-91	RES-CHIP 100 5% 1/10W	
IC006	8-759-575-71	IC M24C04-WMN6T		R022	1-216-025-91	RES-CHIP 100 5% 1/10W	
IC007	8-759-042-02	IC S-80743AL-A7-S		R023	1-216-025-91	RES-CHIP 100 5% 1/10W	
IC008	8-759-242-68	IC TC7W32F		R024	1-216-049-91	RES-CHIP 1K 5% 1/10W	
IC009	8-759-242-78	IC TC7W02F		R026	1-216-025-91	RES-CHIP 100 5% 1/10W	
IC010	8-759-242-74	IC TC7W04F		R027	1-216-033-00	RES-CHIP 220 5% 1/10W	
		<CHIP CONDUCTOR>		R030	1-216-025-91	RES-CHIP 100 5% 1/10W	
JR001	1-216-295-91	SHORT 0		R031	1-216-049-91	RES-CHIP 1K 5% 1/10W	
JR002	1-216-295-91	SHORT 0		R032	1-216-049-91	RES-CHIP 1K 5% 1/10W	
		<COIL>		R033	1-216-049-91	RES-CHIP 1K 5% 1/10W	
L002	1-408-591-11	INDUCTOR 1μH		R034	1-216-049-91	RES-CHIP 1K 5% 1/10W	
L003	1-408-603-31	INDUCTOR 10μH		R035	1-208-792-11	METAL CHIP 2.7K 0.5% 1/10W	
L004	1-408-603-31	INDUCTOR 10μH					
L005	1-408-602-31	INDUCTOR 8.2μH		R036	1-216-025-91	RES-CHIP 100 5% 1/10W	
				R037	1-216-049-91	RES-CHIP 1K 5% 1/10W	
				R038	1-216-025-91	RES-CHIP 100 5% 1/10W	
				R039	1-216-049-91	RES-CHIP 1K 5% 1/10W	
				R040	1-216-025-91	RES-CHIP 100 5% 1/10W	
				R042	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
				R043	1-216-033-00	RES-CHIP 220 5% 1/10W	
				R044	1-216-045-00	RES-CHIP 680 5% 1/10W	

M1 E

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C4338	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V		<IC>		
C4340	1-126-967-11	ELECT 47μF	20% 50V				
C4342	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	IC4301	8-752-090-87	IC CXA2100AQ	
C4343	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V		<CHIP CONDUCTOR>		
C4344	1-126-960-11	ELECT 1μF	20% 50V				
C4345	1-126-967-11	ELECT 47μF	20% 50V	JR4301	1-216-295-91	SHORT 0	
C4346	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	JR4302	1-216-037-00	RES-CHIP 330	5% 1/10W
C4347	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V		<COIL>		
C4348	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V				
C4349	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	L4301	1-412-029-11	INDUCTOR CHIP	10μH
C4350	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	L4302	1-412-029-11	INDUCTOR CHIP	10μH
C4351	1-164-161-11	CERAMIC CHIP 0.0022μF	10% 50V	L4303	1-412-029-11	INDUCTOR CHIP	10μH
C4352	1-126-967-11	ELECT 47μF	20% 50V	L4304	1-412-029-11	INDUCTOR CHIP	10μH
C4353	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V	L4305	1-412-029-11	INDUCTOR CHIP	10μH
C4354	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V				
C4355	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	L4306	1-412-029-11	INDUCTOR CHIP	10μH
C4356	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	L4308	1-412-031-11	INDUCTOR CHIP	47μH
C4357	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	L4309	1-412-031-11	INDUCTOR CHIP	47μH
C4358	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V		<TRANSISTOR>		
C4359	1-164-161-11	CERAMIC CHIP 0.0022μF	10% 50V				
C4360	1-126-964-11	ELECT 10μF	20% 50V	Q4301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C4362	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	Q4303	8-729-216-22	TRANSISTOR 2SA1162-G	
C4363	1-126-967-11	ELECT 47μF	20% 50V	Q4304	8-729-216-22	TRANSISTOR 2SA1162-G	
C4364	1-126-967-11	ELECT 47μF	20% 50V	Q4307	8-729-216-22	TRANSISTOR 2SA1162-G	
C4368	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	Q4308	8-729-216-22	TRANSISTOR 2SA1162-G	
C4369	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V				
C4370	1-126-967-11	ELECT 47μF	20% 50V	Q4310	8-729-216-22	TRANSISTOR 2SA1162-G	
C4371	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	Q4316	8-729-216-22	TRANSISTOR 2SA1162-G	
C4372	1-164-505-11	CERAMIC CHIP 2.2μF	16V	Q4317	8-729-216-22	TRANSISTOR 2SA1162-G	
C4373	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	Q4318	8-729-216-22	TRANSISTOR 2SA1162-G	
C4374	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	Q4319	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C4377	1-126-960-11	ELECT 1μF	20% 50V				
C4382	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	Q4320	8-729-216-22	TRANSISTOR 2SA1162-G	
C4383	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	Q4321	8-729-216-22	TRANSISTOR 2SA1162-G	
C4384	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	Q4322	8-729-216-22	TRANSISTOR 2SA1162-G	
C4601	1-164-161-11	CERAMIC CHIP 0.0022μF	10% 50V	Q4323	8-729-216-22	TRANSISTOR 2SA1162-G	
		<CONNECTOR>		Q4324	8-729-216-22	TRANSISTOR 2SA1162-G	
CN4101	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P					
CN4500	*1-564-512-11	PLUG, CONNECTOR 9P			<RESISTOR>		
CN4502	*1-564-507-11	PLUG, CONNECTOR 4P					
		<DIODE>		R4301	1-216-025-91	RES-CHIP 100	5% 1/10W
D4304	8-719-977-22	DIODE DTZ9.1		R4302	1-216-025-91	RES-CHIP 100	5% 1/10W
D4305	8-719-977-22	DIODE DTZ9.1		R4303	1-216-025-91	RES-CHIP 100	5% 1/10W
D4601	8-719-401-63	DIODE MA3062M-TX		R4304	1-216-025-91	RES-CHIP 100	5% 1/10W
D4602	8-719-914-43	DIODE DAN202K		R4305	1-216-025-91	RES-CHIP 100	5% 1/10W
D4603	8-719-914-43	DIODE DAN202K					
		<FERRITBEAD>		R4306	1-216-045-00	RES-CHIP 680	5% 1/10W
FB4387	1-216-295-91	SHORT 0		R4307	1-216-295-91	SHORT 0	
FB4388	1-216-295-91	SHORT 0		R4309	1-216-295-91	SHORT 0	
FB4389	1-216-295-91	SHORT 0		R4313	1-216-033-00	RES-CHIP 220	5% 1/10W
				R4314	1-216-049-91	RES-CHIP 1K	5% 1/10W
				R4315	1-216-063-91	RES-CHIP 3.9K	5% 1/10W
				R4316	1-216-037-00	RES-CHIP 330	5% 1/10W
				R4317	1-216-049-91	RES-CHIP 1K	5% 1/10W
				R4319	1-216-073-00	RES-CHIP 10K	5% 1/10W
				R4320	1-216-689-11	RES-CHIP 39K	5% 1/10W

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C8326	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V	C8402	1-164-346-11	CERAMIC CHIP 1μF	16V
C8327	1-164-346-11	CERAMIC CHIP 1μF	16V	C8403	1-163-037-11	CERAMIC CHIP 0.022μF	10% 50V
C8328	1-164-346-11	CERAMIC CHIP 1μF	16V	C8405	1-126-933-11	ELECT 100μF	20% 16V
C8329	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8406	1-104-664-11	ELECT 47μF	20% 16V
C8330	1-164-346-11	CERAMIC CHIP 1μF	16V	C8407	1-104-664-11	ELECT 47μF	20% 16V
C8331	1-164-346-11	CERAMIC CHIP 1μF	16V	C8408	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C8332	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V	C8409	1-126-933-11	ELECT 100μF	20% 16V
C8333	1-117-720-11	CERAMIC CHIP 4.7μF	10V	C8410	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8334	1-163-249-11	CERAMIC CHIP 82pF	5% 50V	C8412	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8336	1-104-664-11	ELECT 47μF	20% 16V	C8414	1-104-664-11	ELECT 47μF	20% 16V
C8337	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8415	1-164-346-11	CERAMIC CHIP 1μF	16V
C8338	1-164-346-11	CERAMIC CHIP 1μF	16V	C8416	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8339	1-164-346-11	CERAMIC CHIP 1μF	16V	C8417	1-163-227-11	CERAMIC CHIP 10pF	0.50pF 50V
C8340	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V	C8418	1-126-964-11	ELECT 10μF	20% 50V
C8341	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V	C8419	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8342	1-126-964-11	ELECT 10μF	20% 50V	C8424	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C8343	1-104-664-11	ELECT 47μF	20% 16V	C8425	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C8344	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8437	1-126-963-11	ELECT 4.7μF	20% 50V
C8345	1-104-664-11	ELECT 47μF	20% 16V	C8438	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8346	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8439	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8347	1-163-133-00	CERAMIC CHIP 470pF	5% 50V	C8440	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8348	1-163-133-00	CERAMIC CHIP 470pF	5% 50V	C8446	1-104-664-11	ELECT 47μF	20% 16V
C8349	1-104-664-11	ELECT 47μF	20% 16V	C8447	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8350	1-164-346-11	CERAMIC CHIP 1μF	16V	C8448	1-164-690-91	CERAMIC CHIP 0.0022μF	5% 50V
C8351	1-164-346-11	CERAMIC CHIP 1μF	16V	C8450	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V
C8352	1-104-664-11	ELECT 47μF	20% 16V	C8451	1-164-505-11	CERAMIC CHIP 2.2μF	16V
C8354	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V	C8453	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8355	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C8454	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8356	1-164-346-11	CERAMIC CHIP 1μF	16V	C8455	1-104-664-11	ELECT 47μF	20% 16V
C8357	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C8464	1-115-340-11	CERAMIC CHIP 0.22μF	10% 25V
C8358	1-164-346-11	CERAMIC CHIP 1μF	16V	C8465	1-115-340-11	CERAMIC CHIP 0.22μF	10% 25V
C8359	1-163-037-11	CERAMIC CHIP 0.022μF	10% 50V	C8466	1-104-664-11	ELECT 47μF	20% 16V
C8360	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C8467	1-104-664-11	ELECT 47μF	20% 16V
C8361	1-126-961-11	ELECT 2.2μF	20% 50V	C8468	1-115-340-11	CERAMIC CHIP 0.22μF	10% 25V
C8362	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8469	1-115-340-11	CERAMIC CHIP 0.22μF	10% 25V
C8363	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8474	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8366	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C8477	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C8367	1-104-664-11	ELECT 47μF	20% 16V	C8478	1-163-243-11	CERAMIC CHIP 47pF	5% 50V
C8368	1-104-664-11	ELECT 47μF	20% 16V	C8479	1-163-239-11	CERAMIC CHIP 33pF	5% 50V
C8369	1-104-664-11	ELECT 47μF	20% 16V	C8481	1-104-664-11	ELECT 47μF	20% 16V
C8370	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8482	1-104-664-11	ELECT 47μF	20% 16V
C8371	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8483	1-104-664-11	ELECT 47μF	20% 16V
C8372	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8485	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8373	1-163-227-11	CERAMIC CHIP 10pF	0.50pF 50V	C8492	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8374	1-164-346-11	CERAMIC CHIP 1μF	16V	C8501	1-163-113-00	CERAMIC CHIP 68pF	5% 50V
C8375	1-126-964-11	ELECT 10μF	20% 50V	C8601	1-117-720-11	CERAMIC CHIP 4.7μF	10V
C8376	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8602	1-117-720-11	CERAMIC CHIP 4.7μF	10V
C8381	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C8603	1-117-720-11	CERAMIC CHIP 4.7μF	10V
C8386	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C8604	1-117-720-11	CERAMIC CHIP 4.7μF	10V
C8390	1-126-963-11	ELECT 4.7μF	20% 50V	C8605	1-117-720-11	CERAMIC CHIP 4.7μF	10V
C8391	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8606	1-117-720-11	CERAMIC CHIP 4.7μF	10V
C8392	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8801	1-115-340-11	CERAMIC CHIP 0.22μF	10% 25V
C8393	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	C8802	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C8396	1-107-823-11	CERAMIC CHIP 0.47μF	10% 16V	C8804	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C8399	1-126-961-11	ELECT 2.2μF	20% 50V	C8805	1-126-933-11	ELECT 100μF	20% 16V
C8401	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	C8806	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L8102	1-402-711-11	INDUCTOR 0μH		Q8426	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L8304	1-412-029-11	INDUCTOR CHIP 10μH		Q8601	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L8305	1-414-196-41	INDUCTOR 47μH		Q8602	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L8306	1-414-196-41	INDUCTOR 47μH		Q8603	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q8604	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
L8307	1-414-196-41	INDUCTOR 47μH					
L8501	1-412-029-11	INDUCTOR CHIP 10μH		Q8605	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L8801	1-412-029-11	INDUCTOR CHIP 10μH		Q8606	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L8802	1-412-029-11	INDUCTOR CHIP 10μH		Q8607	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q8801	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q8802	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
	<TRANSISTOR>						
Q8301	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		Q8803	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8302	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q8804	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8303	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q8805	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8304	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q8807	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8306	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q8808	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8307	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		Q8809	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8308	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q8810	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8309	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q8811	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8316	8-729-120-28	TRANSISTOR 2SC1623-L5L6					
Q8317	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R			<RESISTOR>		
Q8318	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8301	1-216-041-00	RES-CHIP 470 5% 1/10W	
Q8319	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8302	1-216-041-00	RES-CHIP 470 5% 1/10W	
Q8321	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8303	1-216-021-00	RES-CHIP 68 5% 1/10W	
Q8322	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8304	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
Q8323	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8305	1-216-105-91	RES-CHIP 220K 5% 1/10W	
Q8324	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8306	1-216-022-00	RES-CHIP 75 5% 1/10W	
Q8326	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8307	1-216-022-00	RES-CHIP 75 5% 1/10W	
Q8327	1-801-806-11	TRANSISTOR DTC144EKA		R8308	1-216-105-91	RES-CHIP 220K 5% 1/10W	
Q8328	1-801-806-11	TRANSISTOR DTC144EKA		R8309	1-216-105-91	RES-CHIP 220K 5% 1/10W	
Q8332	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8310	1-216-022-00	RES-CHIP 75 5% 1/10W	
Q8338	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8311	1-216-105-91	RES-CHIP 220K 5% 1/10W	
Q8340	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8312	1-216-105-91	RES-CHIP 220K 5% 1/10W	
Q8401	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8313	1-216-022-00	RES-CHIP 75 5% 1/10W	
Q8402	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8314	1-216-105-91	RES-CHIP 220K 5% 1/10W	
Q8405	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8315	1-216-105-91	RES-CHIP 220K 5% 1/10W	
Q8406	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8316	1-216-113-00	RES-CHIP 470K 5% 1/10W	
Q8407	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8317	1-216-022-00	RES-CHIP 75 5% 1/10W	
Q8408	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8318	1-216-022-00	RES-CHIP 75 5% 1/10W	
Q8409	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8319	1-216-022-00	RES-CHIP 75 5% 1/10W	
Q8410	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8320	1-216-105-91	RES-CHIP 220K 5% 1/10W	
Q8411	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8321	1-216-105-91	RES-CHIP 220K 5% 1/10W	
Q8412	1-801-806-11	TRANSISTOR DTC144EKA		R8322	1-216-022-00	RES-CHIP 75 5% 1/10W	
Q8413	1-801-806-11	TRANSISTOR DTC144EKA		R8323	1-216-025-91	RES-CHIP 100 5% 1/10W	
Q8414	1-801-806-11	TRANSISTOR DTC144EKA		R8324	1-216-025-91	RES-CHIP 100 5% 1/10W	
Q8415	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8325	1-216-025-91	RES-CHIP 100 5% 1/10W	
Q8416	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8326	1-216-105-91	RES-CHIP 220K 5% 1/10W	
Q8417	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8327	1-216-025-91	RES-CHIP 100 5% 1/10W	
Q8418	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8328	1-216-113-00	RES-CHIP 470K 5% 1/10W	
Q8419	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8329	1-216-113-00	RES-CHIP 470K 5% 1/10W	
Q8420	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8330	1-216-022-00	RES-CHIP 75 5% 1/10W	
Q8421	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8331	1-216-025-91	RES-CHIP 100 5% 1/10W	
Q8422	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8332	1-216-025-91	RES-CHIP 100 5% 1/10W	
Q8423	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8333	1-216-025-91	RES-CHIP 100 5% 1/10W	
Q8424	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R8334	1-216-025-91	RES-CHIP 100 5% 1/10W	
Q8425	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R8335	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK		
R8336	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R8398	1-216-025-91	RES-CHIP	100	5%	1/10W
R8337	1-216-022-00	RES-CHIP	75	5%	1/10W	R8399	1-216-025-91	RES-CHIP	100	5%	1/10W
R8338	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R8400	1-216-025-91	RES-CHIP	100	5%	1/10W
R8339	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R8401	1-216-017-91	RES-CHIP	47	5%	1/10W
R8340	1-216-065-91	RES-CHIP	4.7K	5%	1/10W						
						R8402	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8341	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R8403	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8342	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R8404	1-216-025-91	RES-CHIP	100	5%	1/10W
R8343	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R8405	1-216-033-00	RES-CHIP	220	5%	1/10W
R8344	1-216-022-00	RES-CHIP	75	5%	1/10W	R8406	1-216-033-00	RES-CHIP	220	5%	1/10W
R8345	1-216-025-91	RES-CHIP	100	5%	1/10W						
						R8407	1-216-033-00	RES-CHIP	220	5%	1/10W
R8346	1-216-025-91	RES-CHIP	100	5%	1/10W	R8408	1-216-033-00	RES-CHIP	220	5%	1/10W
R8347	1-216-025-91	RES-CHIP	100	5%	1/10W	R8409	1-216-295-91	SHORT	0		
R8348	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R8410	1-216-295-91	SHORT	0		
R8349	1-216-049-91	RES-CHIP	1K	5%	1/10W	R8411	1-216-083-00	RES-CHIP	27K	5%	1/10W
R8350	1-216-049-91	RES-CHIP	1K	5%	1/10W						
						R8412	1-216-025-91	RES-CHIP	100	5%	1/10W
R8351	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R8413	1-216-041-00	RES-CHIP	470	5%	1/10W
R8352	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R8414	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R8353	1-216-295-91	SHORT	0			R8417	1-216-025-91	RES-CHIP	100	5%	1/10W
R8354	1-216-041-00	RES-CHIP	470	5%	1/10W	R8418	1-216-025-91	RES-CHIP	100	5%	1/10W
R8355	1-216-017-91	RES-CHIP	47	5%	1/10W						
						R8419	1-216-017-91	RES-CHIP	47	5%	1/10W
R8356	1-216-017-91	RES-CHIP	47	5%	1/10W	R8420	1-216-017-91	RES-CHIP	47	5%	1/10W
R8357	1-216-041-00	RES-CHIP	470	5%	1/10W	R8421	1-216-295-91	SHORT	0		
R8362	1-216-642-11	METAL CHIP	430	0.5%	1/10W	R8422	1-216-295-91	SHORT	0		
R8363	1-208-774-11	METAL CHIP	470	0.5%	1/10W	R8424	1-216-083-00	RES-CHIP	27K	5%	1/10W
R8364	1-216-041-00	RES-CHIP	470	5%	1/10W						
						R8425	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8365	1-216-067-00	RES-CHIP	5.6K	5%	1/10W	R8426	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R8366	1-216-067-00	RES-CHIP	5.6K	5%	1/10W	R8427	1-216-295-91	SHORT	0		
R8367	1-216-041-00	RES-CHIP	470	5%	1/10W	R8428	1-216-295-91	SHORT	0		
R8368	1-216-041-00	RES-CHIP	470	5%	1/10W	R8431	1-216-295-91	SHORT	0		
R8369	1-216-295-91	SHORT	0								
						R8432	1-216-295-91	SHORT	0		
R8370	1-216-025-91	RES-CHIP	100	5%	1/10W	R8436	1-216-017-91	RES-CHIP	47	5%	1/10W
R8373	1-216-039-00	RES-CHIP	390	5%	1/10W	R8437	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8374	1-216-041-00	RES-CHIP	470	5%	1/10W	R8438	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8375	1-216-017-91	RES-CHIP	47	5%	1/10W	R8439	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8376	1-216-049-91	RES-CHIP	1K	5%	1/10W						
						R8440	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8377	1-216-025-91	RES-CHIP	100	5%	1/10W	R8441	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8378	1-216-033-00	RES-CHIP	220	5%	1/10W	R8443	1-216-025-91	RES-CHIP	100	5%	1/10W
R8379	1-216-033-00	RES-CHIP	220	5%	1/10W	R8444	1-216-025-91	RES-CHIP	100	5%	1/10W
R8380	1-216-025-91	RES-CHIP	100	5%	1/10W	R8445	1-216-017-91	RES-CHIP	47	5%	1/10W
R8381	1-216-025-91	RES-CHIP	100	5%	1/10W						
						R8446	1-216-295-91	SHORT	0		
R8382	1-216-033-00	RES-CHIP	220	5%	1/10W	R8447	1-216-041-00	RES-CHIP	470	5%	1/10W
R8383	1-216-033-00	RES-CHIP	220	5%	1/10W	R8448	1-216-033-00	RES-CHIP	220	5%	1/10W
R8384	1-216-025-91	RES-CHIP	100	5%	1/10W	R8449	1-216-041-00	RES-CHIP	470	5%	1/10W
R8385	1-216-025-91	RES-CHIP	100	5%	1/10W	R8451	1-216-041-00	RES-CHIP	470	5%	1/10W
R8386	1-216-025-91	RES-CHIP	100	5%	1/10W						
						R8452	1-216-041-00	RES-CHIP	470	5%	1/10W
R8387	1-216-017-91	RES-CHIP	47	5%	1/10W	R8453	1-216-033-00	RES-CHIP	220	5%	1/10W
R8388	1-216-031-00	RES-CHIP	180	5%	1/10W	R8454	1-216-041-00	RES-CHIP	470	5%	1/10W
R8389	1-216-033-00	RES-CHIP	220	5%	1/10W	R8455	1-216-041-00	RES-CHIP	470	5%	1/10W
R8390	1-216-017-91	RES-CHIP	47	5%	1/10W	R8456	1-216-041-00	RES-CHIP	470	5%	1/10W
R8391	1-216-017-91	RES-CHIP	47	5%	1/10W						
						R8458	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8392	1-216-017-91	RES-CHIP	47	5%	1/10W	R8461	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8393	1-216-017-91	RES-CHIP	47	5%	1/10W	R8464	1-216-041-00	RES-CHIP	470	5%	1/10W
R8394	1-216-025-91	RES-CHIP	100	5%	1/10W	R8465	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8395	1-216-033-00	RES-CHIP	220	5%	1/10W	R8466	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8396	1-216-033-00	RES-CHIP	220	5%	1/10W						
						R8467	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8397	1-216-025-91	RES-CHIP	100	5%	1/10W	R8468	1-216-113-00	RES-CHIP	470K	5%	1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R8469	1-216-049-91	RES-CHIP	1K 5% 1/10W	R8572	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8470	1-216-069-00	RES-CHIP	6.8K 5% 1/10W	R8573	1-208-776-11	METAL CHIP	560 0.5% 1/10W
R8471	1-216-069-00	RES-CHIP	6.8K 5% 1/10W				
R8472	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R8574	1-208-800-11	METAL CHIP	5.6K 0.5% 1/10W
R8473	1-216-025-91	RES-CHIP	100 5% 1/10W	R8575	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8478	1-216-089-91	RES-CHIP	47K 5% 1/10W	R8577	1-216-295-91	SHORT	0
R8479	1-216-097-91	RES-CHIP	100K 5% 1/10W	R8580	1-216-025-91	RES-CHIP	100 5% 1/10W
R8480	1-216-073-00	RES-CHIP	10K 5% 1/10W	R8581	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8481	1-216-095-00	RES-CHIP	82K 5% 1/10W	R8582	1-208-776-11	METAL CHIP	560 0.5% 1/10W
R8482	1-216-089-91	RES-CHIP	47K 5% 1/10W	R8583	1-208-800-11	METAL CHIP	5.6K 0.5% 1/10W
R8484	1-216-045-00	RES-CHIP	680 5% 1/10W	R8584	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8485	1-216-013-00	RES-CHIP	33 5% 1/10W	R8586	1-216-295-91	SHORT	0
R8487	1-216-045-00	RES-CHIP	680 5% 1/10W	R8589	1-216-025-91	RES-CHIP	100 5% 1/10W
R8488	1-216-041-00	RES-CHIP	470 5% 1/10W	R8590	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8490	1-216-049-91	RES-CHIP	1K 5% 1/10W	R8591	1-208-776-11	METAL CHIP	560 0.5% 1/10W
R8494	1-216-295-91	SHORT	0	R8592	1-208-800-11	METAL CHIP	5.6K 0.5% 1/10W
R8496	1-216-025-91	RES-CHIP	100 5% 1/10W	R8593	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8502	1-216-295-91	SHORT	0	R8595	1-216-295-91	SHORT	0
R8503	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R8596	1-216-295-91	SHORT	0
R8504	1-216-025-91	RES-CHIP	100 5% 1/10W	R8601	1-216-089-91	RES-CHIP	47K 5% 1/10W
R8510	1-216-049-91	RES-CHIP	1K 5% 1/10W	R8602	1-216-025-91	RES-CHIP	100 5% 1/10W
R8514	1-216-295-91	SHORT	0	R8603	1-216-097-91	RES-CHIP	100K 5% 1/10W
R8515	1-216-295-91	SHORT	0	R8604	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8519	1-216-025-91	RES-CHIP	100 5% 1/10W	R8605	1-216-089-91	RES-CHIP	47K 5% 1/10W
R8523	1-216-049-91	RES-CHIP	1K 5% 1/10W	R8606	1-216-025-91	RES-CHIP	100 5% 1/10W
R8525	1-216-025-91	RES-CHIP	100 5% 1/10W	R8607	1-216-097-91	RES-CHIP	100K 5% 1/10W
R8526	1-216-037-00	RES-CHIP	330 5% 1/10W	R8608	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8529	1-216-049-91	RES-CHIP	1K 5% 1/10W	R8609	1-216-089-91	RES-CHIP	47K 5% 1/10W
R8530	1-216-025-91	RES-CHIP	100 5% 1/10W	R8610	1-216-025-91	RES-CHIP	100 5% 1/10W
R8531	1-216-295-91	SHORT	0	R8611	1-216-097-91	RES-CHIP	100K 5% 1/10W
R8535	1-216-049-91	RES-CHIP	1K 5% 1/10W	R8612	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8536	1-216-025-91	RES-CHIP	100 5% 1/10W	R8613	1-216-033-00	RES-CHIP	220 5% 1/10W
R8537	1-216-025-91	RES-CHIP	100 5% 1/10W	R8614	1-216-031-00	RES-CHIP	180 5% 1/10W
R8539	1-216-025-91	RES-CHIP	100 5% 1/10W	R8615	1-216-025-91	RES-CHIP	100 5% 1/10W
R8542	1-216-041-00	RES-CHIP	470 5% 1/10W	R8616	1-216-295-91	SHORT	0
R8543	1-216-039-00	RES-CHIP	390 5% 1/10W	R8617	1-216-089-91	RES-CHIP	47K 5% 1/10W
R8544	1-216-041-00	RES-CHIP	470 5% 1/10W	R8618	1-216-097-91	RES-CHIP	100K 5% 1/10W
R8545	1-216-049-91	RES-CHIP	1K 5% 1/10W	R8619	1-216-025-91	RES-CHIP	100 5% 1/10W
R8546	1-216-295-91	SHORT	0	R8620	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8547	1-216-295-91	SHORT	0	R8621	1-216-089-91	RES-CHIP	47K 5% 1/10W
R8548	1-216-025-91	RES-CHIP	100 5% 1/10W	R8622	1-216-097-91	RES-CHIP	100K 5% 1/10W
R8552	1-216-049-91	RES-CHIP	1K 5% 1/10W	R8623	1-216-025-91	RES-CHIP	100 5% 1/10W
R8554	1-216-025-91	RES-CHIP	100 5% 1/10W	R8624	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8555	1-208-774-11	METAL CHIP	470 0.5% 1/10W	R8625	1-216-089-91	RES-CHIP	47K 5% 1/10W
R8556	1-216-081-00	RES-CHIP	22K 5% 1/10W	R8626	1-216-097-91	RES-CHIP	100K 5% 1/10W
R8557	1-208-768-11	METAL CHIP	270 0.5% 1/10W	R8627	1-216-025-91	RES-CHIP	100 5% 1/10W
R8558	1-216-081-00	RES-CHIP	22K 5% 1/10W	R8628	1-216-049-91	RES-CHIP	1K 5% 1/10W
R8559	1-216-049-91	RES-CHIP	1K 5% 1/10W	R8629	1-216-295-91	SHORT	0
R8561	1-216-025-91	RES-CHIP	100 5% 1/10W	R8630	1-208-765-11	METAL CHIP	200 0.5% 1/10W
R8562	1-216-043-91	RES-CHIP	560 5% 1/10W	R8631	1-216-033-00	RES-CHIP	220 5% 1/10W
R8563	1-216-081-00	RES-CHIP	22K 5% 1/10W	R8632	1-216-025-91	RES-CHIP	100 5% 1/10W
R8564	1-216-033-00	RES-CHIP	220 5% 1/10W	R8633	1-216-025-91	RES-CHIP	100 5% 1/10W
R8565	1-216-081-00	RES-CHIP	22K 5% 1/10W	R8634	1-216-025-91	RES-CHIP	100 5% 1/10W
R8566	1-216-049-91	RES-CHIP	1K 5% 1/10W	R8801	1-216-017-91	RES-CHIP	47 5% 1/10W
R8568	1-216-295-91	SHORT	0	R8803	1-216-075-00	RES-CHIP	12K 5% 1/10W
R8571	1-216-025-91	RES-CHIP	100 5% 1/10W	R8804	1-216-069-00	RES-CHIP	6.8K 5% 1/10W
				R8805	1-216-037-00	RES-CHIP	330 5% 1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R8806	1-216-041-00	RES-CHIP	470 5% 1/10W	* A-1136-088-A BD BOARD, COMPLETE *****			
R8807	1-216-033-00	RES-CHIP	220 5% 1/10W	<CAPACITOR>			
R8808	1-216-053-00	RES-CHIP	1.5K 5% 1/10W	C2601	1-104-664-11	ELECT 47μF	20% 25V
R8809	1-216-037-00	RES-CHIP	330 5% 1/10W	C2602	1-163-259-91	CERAMIC CHIP 220pF	5% 50V
R8810	1-216-043-91	RES-CHIP	560 5% 1/10W	C2603	1-104-664-11	ELECT 47μF	20% 25V
R8811	1-216-091-00	RES-CHIP	56K 5% 1/10W	C2604	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8812	1-216-067-00	RES-CHIP	5.6K 5% 1/10W	C2607	1-163-275-11	CERAMIC CHIP 0.001μF	5% 50V
R8813	1-216-049-91	RES-CHIP	1K 5% 1/10W	C2608	1-104-664-11	ELECT 47μF	20% 25V
R8814	1-216-017-91	RES-CHIP	47 5% 1/10W	C2609	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8815	1-216-295-91	SHORT	0	C2610	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8816	1-208-782-11	METAL CHIP	1K 0.5% 1/10W	C2611	1-104-664-11	ELECT 47μF	20% 25V
R8819	1-216-295-91	SHORT	0	C2612	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8820	1-208-770-11	METAL CHIP	330 0.5% 1/10W	C2613	1-104-664-11	ELECT 47μF	20% 25V
R8821	1-208-782-11	METAL CHIP	1K 0.5% 1/10W	C2615	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8822	1-208-770-11	METAL CHIP	330 0.5% 1/10W	C2616	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8823	1-216-049-91	RES-CHIP	1K 5% 1/10W	C2617	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8824	1-208-793-11	METAL CHIP	3K 0.5% 1/10W	C2618	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8825	1-216-049-91	RES-CHIP	1K 5% 1/10W	C2619	1-164-690-91	CERAMIC CHIP 0.0022μF	5% 50V
R8826	1-216-047-91	RES-CHIP	820 5% 1/10W	C2620	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8827	1-208-789-11	METAL CHIP	2K 0.5% 1/10W	C2621	1-104-664-11	ELECT 47μF	20% 25V
R8828	1-216-047-91	RES-CHIP	820 5% 1/10W	C2622	1-104-664-11	ELECT 47μF	20% 25V
R8829	1-216-061-00	RES-CHIP	3.3K 5% 1/10W	C2623	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8830	1-216-295-91	SHORT	0	C2624	1-164-161-11	CERAMIC CHIP 0.0022μF	10% 50V
R8832	1-216-295-91	SHORT	0	C2625	1-104-664-11	ELECT 47μF	20% 25V
R8834	1-216-053-00	RES-CHIP	1.5K 5% 1/10W	C2626	1-115-339-11	CERAMIC CHIP 0.1μF	10% 50V
R8835	1-216-051-00	RES-CHIP	1.2K 5% 1/10W	C2627	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8838	1-216-053-00	RES-CHIP	1.5K 5% 1/10W	C2628	1-104-664-11	ELECT 47μF	20% 25V
R8840	1-216-081-00	RES-CHIP	22K 5% 1/10W	C2631	1-163-275-11	CERAMIC CHIP 0.001μF	5% 50V
R8841	1-216-081-00	RES-CHIP	22K 5% 1/10W	C2633	1-115-339-11	CERAMIC CHIP 0.1μF	10% 50V
R8844	1-216-049-91	RES-CHIP	1K 5% 1/10W	C2635	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8847	1-216-295-91	SHORT	0	C2636	1-104-664-11	ELECT 47μF	20% 25V
R8848	1-216-295-91	SHORT	0	C2637	1-163-259-91	CERAMIC CHIP 220pF	5% 50V
R8849	1-216-035-00	RES-CHIP	270 5% 1/10W	C2639	1-104-664-11	ELECT 47μF	20% 25V
R8851	1-216-041-00	RES-CHIP	470 5% 1/10W	C2640	1-104-664-11	ELECT 47μF	20% 25V
R8852	1-216-041-00	RES-CHIP	470 5% 1/10W	C2641	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8853	1-216-093-91	RES-CHIP	68K 5% 1/10W	C2643	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8854	1-216-083-00	RES-CHIP	27K 5% 1/10W	C2644	1-164-690-91	CERAMIC CHIP 0.0022μF	5% 50V
R8855	1-216-043-91	RES-CHIP	560 5% 1/10W	C2645	1-163-038-91	CERAMIC CHIP 0.1μF	25V
R8856	1-216-051-00	RES-CHIP	1.2K 5% 1/10W	C2647	1-104-664-11	ELECT 47μF	20% 25V
R8857	1-216-051-00	RES-CHIP	1.2K 5% 1/10W	C2648	1-163-038-91	CERAMIC CHIP 0.1μF	25V
<TERMINALBOARD>				C2649	1-163-038-91	CERAMIC CHIP 0.1μF	25V
TB8101	1-537-712-11	TERMINAL, PUSH (CENTER SP IN)		C2650	1-163-038-91	CERAMIC CHIP 0.1μF	25V
<CRYSTAL>				C2651	1-104-664-11	ELECT 47μF	20% 25V
X8301	1-781-612-11	VIBRATOR, CRYSTAL (16.2MHz)		C2652	1-163-038-91	CERAMIC CHIP 0.1μF	25V
X8302	1-781-612-11	VIBRATOR, CRYSTAL (16.2MHz)		C2655	1-163-275-11	CERAMIC CHIP 0.001μF	5% 50V
*****				C2656	1-104-664-11	ELECT 47μF	20% 25V
				C2658	1-163-038-91	CERAMIC CHIP 0.1μF	25V
				C2659	1-163-038-91	CERAMIC CHIP 0.1μF	25V
				C2660	1-104-664-11	ELECT 47μF	20% 25V
				C2661	1-163-259-91	CERAMIC CHIP 220pF	5% 50V
				C2662	1-163-038-91	CERAMIC CHIP 0.1μF	25V
				C2663	1-104-664-11	ELECT 47μF	20% 25V
				C2666	1-163-038-91	CERAMIC CHIP 0.1μF	25V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D2608	8-719-976-99	DIODE DTZ5.1B				<CHIP CONDUCTOR>	
D2609	8-719-988-61	DIODE 1SS355TE-17					
D2610	8-719-988-61	DIODE 1SS355TE-17		JR2605	1-216-295-91	SHORT	0
D2611	8-719-988-61	DIODE 1SS355TE-17					
D2612	8-719-976-99	DIODE DTZ5.1B				<COIL>	
D2613	8-719-158-49	DIODE RD12SB2					
D2614	8-719-976-99	DIODE DTZ5.1B		L2601	1-414-234-22	INDUCTOR CHIP	0μH
D2615	8-719-988-61	DIODE 1SS355TE-17		L2602	1-414-234-22	INDUCTOR CHIP	0μH
				L2605	1-469-555-21	INDUCTOR	10μH
D2616	8-719-976-99	DIODE DTZ5.1B		L2606	1-414-234-22	INDUCTOR CHIP	0μH
D2617	8-719-158-49	DIODE RD12SB2		L2608	1-469-555-21	INDUCTOR	10μH
D2618	8-719-976-99	DIODE DTZ5.1B					
D2619	8-719-988-61	DIODE 1SS355TE-17		L2609	1-414-234-22	INDUCTOR CHIP	0μH
D2620	8-719-158-49	DIODE RD12SB2		L2610	1-414-234-22	INDUCTOR CHIP	0μH
				L2611	1-412-029-11	INDUCTOR CHIP	10μH
D2621	8-719-976-99	DIODE DTZ5.1B		L2612	1-414-234-22	INDUCTOR CHIP	0μH
D2622	8-719-976-99	DIODE DTZ5.1B		L2615	1-414-234-22	INDUCTOR CHIP	0μH
D2623	8-719-988-61	DIODE 1SS355TE-17					
D2624	8-719-988-61	DIODE 1SS355TE-17		L2616	1-414-234-22	INDUCTOR CHIP	0μH
				L2617	1-469-555-21	INDUCTOR	10μH
				L2618	1-469-555-21	INDUCTOR	10μH
				L2619	1-414-234-22	INDUCTOR CHIP	0μH
				L2621	1-414-234-22	INDUCTOR CHIP	0μH
				L2622	1-414-234-22	INDUCTOR CHIP	0μH
FB2601	1-216-295-91	SHORT	0	L2625	1-414-234-22	INDUCTOR CHIP	0μH
FB2602	1-216-295-91	SHORT	0	L2626	1-469-555-21	INDUCTOR	10μH
FB2603	1-216-295-91	SHORT	0	L2627	1-414-234-22	INDUCTOR CHIP	0μH
FB2604	1-216-295-91	SHORT	0	L2628	1-469-555-21	INDUCTOR	10μH
				L2629	1-414-234-22	INDUCTOR CHIP	0μH
				L2633	1-412-029-11	INDUCTOR CHIP	10μH
IC2601	8-759-106-02	IC μPC4570G2		L2634	1-414-234-22	INDUCTOR CHIP	0μH
IC2602	8-759-998-22	IC PCM56P		L2635	1-414-234-22	INDUCTOR CHIP	0μH
IC2603	8-759-106-02	IC μPC4570G2		L2636	1-469-555-21	INDUCTOR	10μH
IC2604	8-759-998-22	IC PCM56P					
IC2605	8-759-589-66	IC CM0006CF		L2637	1-414-234-22	INDUCTOR CHIP	0μH
IC2606	8-759-485-79	IC TC7SET08FU(TE85)		L2638	1-414-234-22	INDUCTOR CHIP	0μH
IC2607	8-759-925-85	IC SN74HC32ANS		L2639	1-469-555-21	INDUCTOR	10μH
IC2608	8-759-106-02	IC μPC4570G2		L2640	1-414-234-22	INDUCTOR CHIP	0μH
IC2609	8-759-998-22	IC PCM56P		L2643	1-414-234-22	INDUCTOR CHIP	0μH
IC2610	8-759-106-02	IC μPC4570G2					
				L2645	1-469-555-21	INDUCTOR	10μH
IC2611	8-759-488-29	IC TC7W66FU(TE12R)		L2646	1-414-234-22	INDUCTOR CHIP	0μH
IC2612	8-759-669-75	IC TLC2932IPWR		L2647	1-414-234-22	INDUCTOR CHIP	0μH
IC2613	8-759-925-90	IC SN74HC74ANS		L2648	1-469-555-21	INDUCTOR	10μH
IC2614	8-759-998-22	IC PCM56P		L2649	1-412-029-11	INDUCTOR CHIP	10μH
IC2615	8-759-485-79	IC TC7SET08FU(TE85)					
				L2652	1-414-234-22	INDUCTOR CHIP	0μH
IC2616	8-759-106-02	IC μPC4570G2		L2653	1-469-555-21	INDUCTOR	10μH
IC2617	8-759-352-91	IC PST9143NL		L2654	1-414-234-22	INDUCTOR CHIP	0μH
IC2618	8-759-038-15	IC MC74HC4538AF		L2656	1-469-555-21	INDUCTOR	10μH
IC2619	8-752-916-83	IC CXP86324-028Q		L2657	1-414-234-22	INDUCTOR CHIP	0μH
IC2620	8-759-367-69	IC MC74HC74AFEL					
				L2658	1-414-234-22	INDUCTOR CHIP	0μH
IC2621	8-759-564-06	IC M24C32-MN6T		L2659	1-414-234-22	INDUCTOR CHIP	0μH
IC2622	8-759-106-02	IC μPC4570G2		L2661	1-414-234-22	INDUCTOR CHIP	0μH
IC2623	8-759-998-22	IC PCM56P		L2663	1-414-234-22	INDUCTOR CHIP	0μH
IC2625	8-759-998-22	IC PCM56P		L2664	1-414-234-22	INDUCTOR CHIP	0μH
IC2626	8-759-394-80	IC NJM2058M-TE2					
				L2665	1-216-295-91	SHORT	0
IC2627	8-759-394-80	IC NJM2058M-TE2		L2666	1-216-295-91	SHORT	0
				L2667	1-216-295-91	SHORT	0
				L2668	1-216-295-91	SHORT	0
				L2669	1-216-295-91	SHORT	0



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L2670	1-216-295-91	SHORT	0	R2650	1-216-025-91	RES-CHIP	100 5% 1/10W
	<TRANSISTOR>			R2651	1-216-025-91	RES-CHIP	100 5% 1/10W
Q2601	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R2652	1-216-025-91	RES-CHIP	100 5% 1/10W
Q2602	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R2653	1-216-025-91	RES-CHIP	100 5% 1/10W
Q2603	1-801-806-11	TRANSISTOR DTC144EKA		R2654	1-216-071-00	RES-CHIP	8.2K 5% 1/10W
Q2604	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R2655	1-216-025-91	RES-CHIP	100 5% 1/10W
Q2605	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R2657	1-216-025-91	RES-CHIP	100 5% 1/10W
				R2658	1-216-025-91	RES-CHIP	100 5% 1/10W
Q2606	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R2659	1-216-025-91	RES-CHIP	100 5% 1/10W
Q2607	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R2661	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
Q2608	1-801-806-11	TRANSISTOR DTC144EKA		R2662	1-216-025-91	RES-CHIP	100 5% 1/10W
Q2610	1-801-806-11	TRANSISTOR DTC144EKA		R2663	1-216-025-91	RES-CHIP	100 5% 1/10W
Q2611	1-801-806-11	TRANSISTOR DTC144EKA		R2664	1-216-049-91	RES-CHIP	1K 5% 1/10W
				R2665	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
Q2612	1-801-806-11	TRANSISTOR DTC144EKA		R2666	1-216-033-00	RES-CHIP	220 5% 1/10W
Q2613	1-801-806-11	TRANSISTOR DTC144EKA		R2667	1-216-049-91	RES-CHIP	1K 5% 1/10W
Q2614	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R2668	1-216-049-91	RES-CHIP	1K 5% 1/10W
	<RESISTOR>			R2669	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
				R2671	1-216-025-91	RES-CHIP	100 5% 1/10W
R2601	1-208-782-11	METAL CHIP	1K 0.5% 1/10W	R2672	1-216-025-91	RES-CHIP	100 5% 1/10W
R2602	1-208-799-11	METAL CHIP	5.1K 0.5% 1/10W	R2673	1-216-049-91	RES-CHIP	1K 5% 1/10W
R2603	1-208-782-11	METAL CHIP	1K 0.5% 1/10W	R2674	1-216-049-91	RES-CHIP	1K 5% 1/10W
R2606	1-208-799-11	METAL CHIP	5.1K 0.5% 1/10W	R2675	1-216-049-91	RES-CHIP	1K 5% 1/10W
R2607	1-216-295-91	SHORT	0	R2676	1-216-049-91	RES-CHIP	1K 5% 1/10W
R2608	1-216-295-91	SHORT	0	R2677	1-216-049-91	RES-CHIP	1K 5% 1/10W
R2609	1-216-025-91	RES-CHIP	100 5% 1/10W	R2678	1-216-025-91	RES-CHIP	100 5% 1/10W
R2610	1-216-025-91	RES-CHIP	100 5% 1/10W	R2679	1-216-025-91	RES-CHIP	100 5% 1/10W
R2611	1-216-025-91	RES-CHIP	100 5% 1/10W	R2680	1-216-033-00	RES-CHIP	220 5% 1/10W
R2612	1-216-025-91	RES-CHIP	100 5% 1/10W	R2681	1-216-025-91	RES-CHIP	100 5% 1/10W
R2613	1-216-025-91	RES-CHIP	100 5% 1/10W	R2682	1-216-025-91	RES-CHIP	100 5% 1/10W
R2621	1-216-025-91	RES-CHIP	100 5% 1/10W	R2683	1-216-073-00	RES-CHIP	10K 5% 1/10W
R2622	1-216-025-91	RES-CHIP	100 5% 1/10W	R2684	1-208-799-11	METAL CHIP	5.1K 0.5% 1/10W
R2623	1-216-025-91	RES-CHIP	100 5% 1/10W	R2685	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R2624	1-216-081-00	RES-CHIP	22K 5% 1/10W	R2688	1-216-037-00	RES-CHIP	330 5% 1/10W
R2625	1-216-025-91	RES-CHIP	100 5% 1/10W	R2689	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R2628	1-216-049-91	RES-CHIP	1K 5% 1/10W	R2690	1-208-799-11	METAL CHIP	5.1K 0.5% 1/10W
R2629	1-208-782-11	METAL CHIP	1K 0.5% 1/10W	R2691	1-216-295-91	SHORT	0
R2630	1-208-816-11	METAL CHIP	27K 0.5% 1/10W	R2692	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R2631	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	R2693	1-216-295-91	SHORT	0
R2632	1-208-782-11	METAL CHIP	1K 0.5% 1/10W	R2694	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R2634	1-216-049-91	RES-CHIP	1K 5% 1/10W	R2695	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R2635	1-208-802-11	METAL CHIP	6.8K 0.5% 1/10W	R2698	1-216-037-00	RES-CHIP	330 5% 1/10W
R2636	1-216-295-91	SHORT	0	R2699	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R2637	1-216-071-00	RES-CHIP	8.2K 5% 1/10W	R2701	1-216-041-00	RES-CHIP	470 5% 1/10W
R2638	1-216-049-91	RES-CHIP	1K 5% 1/10W	R2703	1-216-037-00	RES-CHIP	330 5% 1/10W
R2639	1-208-801-11	METAL CHIP	6.2K 0.5% 1/10W	R2704	1-216-049-91	RES-CHIP	1K 5% 1/10W
R2640	1-216-033-00	RES-CHIP	220 5% 1/10W	R2705	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R2641	1-208-799-11	METAL CHIP	5.1K 0.5% 1/10W	R2706	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R2643	1-216-033-00	RES-CHIP	220 5% 1/10W	R2707	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R2644	1-216-071-00	RES-CHIP	8.2K 5% 1/10W	R2708	1-216-049-91	RES-CHIP	1K 5% 1/10W
R2645	1-216-033-00	RES-CHIP	220 5% 1/10W	R2709	1-216-025-91	RES-CHIP	100 5% 1/10W
R2646	1-208-799-11	METAL CHIP	5.1K 0.5% 1/10W	R2710	1-216-025-91	RES-CHIP	100 5% 1/10W
R2647	1-216-025-91	RES-CHIP	100 5% 1/10W	R2712	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R2648	1-216-295-91	SHORT	0	R2714	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R2649	1-216-295-91	SHORT	0	R2715	1-216-049-91	RES-CHIP	1K 5% 1/10W
				R2716	1-216-025-91	RES-CHIP	100 5% 1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK		
R2717	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W	R2785	1-216-041-00	RES-CHIP	470	5%	1/10W
R2719	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W	R2786	1-216-041-00	RES-CHIP	470	5%	1/10W
R2720	1-216-295-91	SHORT	0								
R2721	1-216-295-91	SHORT	0			R2787	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R2723	1-208-793-11	METAL CHIP	3K	0.5%	1/10W	R2789	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W
R2725	1-208-776-11	METAL CHIP	560	0.5%	1/10W	R2790	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R2726	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W	R2791	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2728	1-216-025-91	RES-CHIP	100	5%	1/10W	R2792	1-216-033-00	RES-CHIP	220	5%	1/10W
R2729	1-216-033-00	RES-CHIP	220	5%	1/10W	R2793	1-216-033-00	RES-CHIP	220	5%	1/10W
R2730	1-216-025-91	RES-CHIP	100	5%	1/10W	R2794	1-216-025-91	RES-CHIP	100	5%	1/10W
R2731	1-208-850-11	METAL CHIP	680K	0.5%	1/10W	R2796	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2732	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	R2797	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2733	1-216-025-91	RES-CHIP	100	5%	1/10W	R2799	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R2734	1-216-025-91	RES-CHIP	100	5%	1/10W	R2800	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2735	1-216-025-91	RES-CHIP	100	5%	1/10W	R2803	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W
R2736	1-216-025-91	RES-CHIP	100	5%	1/10W	R2804	1-216-295-91	SHORT	0		
R2737	1-216-025-91	RES-CHIP	100	5%	1/10W	R2805	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2738	1-216-049-91	RES-CHIP	1K	5%	1/10W	R2806	1-216-025-91	RES-CHIP	100	5%	1/10W
R2739	1-216-025-91	RES-CHIP	100	5%	1/10W	R2807	1-216-295-91	SHORT	0		
R2740	1-216-025-91	RES-CHIP	100	5%	1/10W	R2808	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2741	1-216-033-00	RES-CHIP	220	5%	1/10W	R2809	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2742	1-216-025-91	RES-CHIP	100	5%	1/10W	R2810	1-216-025-91	RES-CHIP	100	5%	1/10W
R2743	1-216-025-91	RES-CHIP	100	5%	1/10W	R2811	1-216-025-91	RES-CHIP	100	5%	1/10W
R2744	1-216-025-91	RES-CHIP	100	5%	1/10W	R2812	1-216-025-91	RES-CHIP	100	5%	1/10W
R2745	1-216-025-91	RES-CHIP	100	5%	1/10W	R2813	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2746	1-208-850-11	METAL CHIP	680K	0.5%	1/10W	R2814	1-216-025-91	RES-CHIP	100	5%	1/10W
R2747	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	R2815	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2750	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W	R2818	1-216-025-91	RES-CHIP	100	5%	1/10W
R2751	1-216-025-91	RES-CHIP	100	5%	1/10W	R2821	1-216-025-91	RES-CHIP	100	5%	1/10W
R2752	1-216-025-91	RES-CHIP	100	5%	1/10W	R2823	1-216-033-00	RES-CHIP	220	5%	1/10W
R2753	1-216-025-91	RES-CHIP	100	5%	1/10W	R2824	1-216-033-00	RES-CHIP	220	5%	1/10W
R2755	1-216-073-00	RES-CHIP	10K	5%	1/10W	R2825	1-216-033-00	RES-CHIP	220	5%	1/10W
R2756	1-216-073-00	RES-CHIP	10K	5%	1/10W	R2826	1-216-033-00	RES-CHIP	220	5%	1/10W
R2758	1-216-025-91	RES-CHIP	100	5%	1/10W	R2827	1-216-033-00	RES-CHIP	220	5%	1/10W
R2759	1-216-033-00	RES-CHIP	220	5%	1/10W	R2831	1-216-025-91	RES-CHIP	100	5%	1/10W
R2760	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W	R2832	1-216-025-91	RES-CHIP	100	5%	1/10W
R2761	1-216-295-91	SHORT	0			R2834	1-216-025-91	RES-CHIP	100	5%	1/10W
R2762	1-216-295-91	SHORT	0			R2835	1-216-025-91	RES-CHIP	100	5%	1/10W
R2763	1-216-025-91	RES-CHIP	100	5%	1/10W	R2836	1-216-118-00	RES-CHIP	750K	5%	1/10W
R2764	1-216-049-91	RES-CHIP	1K	5%	1/10W	R2837	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2765	1-216-025-91	RES-CHIP	100	5%	1/10W	R2838	1-216-122-11	RES-CHIP	1.1M	5%	1/10W
R2766	1-216-049-91	RES-CHIP	1K	5%	1/10W	R2839	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2767	1-216-033-00	RES-CHIP	220	5%	1/10W	R2840	1-216-025-91	RES-CHIP	100	5%	1/10W
R2768	1-216-049-91	RES-CHIP	1K	5%	1/10W	R2841	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2769	1-216-025-91	RES-CHIP	100	5%	1/10W	R2842	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2771	1-216-033-00	RES-CHIP	220	5%	1/10W	R2843	1-216-295-91	SHORT	0		
R2773	1-216-025-91	RES-CHIP	100	5%	1/10W	R2844	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2774	1-216-073-00	RES-CHIP	10K	5%	1/10W	R2845	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2775	1-216-025-91	RES-CHIP	100	5%	1/10W	R2846	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2777	1-216-025-91	RES-CHIP	100	5%	1/10W	R2847	1-216-025-91	RES-CHIP	100	5%	1/10W
R2778	1-216-025-91	RES-CHIP	100	5%	1/10W	R2848	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2779	1-216-025-91	RES-CHIP	100	5%	1/10W	R2849	1-216-025-91	RES-CHIP	100	5%	1/10W
R2781	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	R2850	1-216-124-11	RES-CHIP	1.3M	5%	1/10W
R2782	1-216-073-00	RES-CHIP	10K	5%	1/10W	R2851	1-216-124-11	RES-CHIP	1.3M	5%	1/10W
R2783	1-216-295-91	SHORT	0			R2852	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R2784	1-216-025-91	RES-CHIP	100	5%	1/10W	R2853	1-216-073-00	RES-CHIP	10K	5%	1/10W
						R2872	1-216-049-91	RES-CHIP	1K	5%	1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R2873	1-216-049-91	RES-CHIP 1K	5% 1/10W	R3502	1-216-093-91	RES-CHIP 68K	5% 1/10W
		<CRYSTAL>		R3503	1-216-073-00	RES-CHIP 10K	5% 1/10W
				R3504	1-216-689-11	RES-CHIP 39K	5% 1/10W
				R3506	1-216-057-00	RES-CHIP 2.2K	5% 1/10W
X2701	1-767-925-21	VIBRATOR, CRYSTAL (12MHZ)		R3507	1-216-689-11	RES-CHIP 39K	5% 1/10W
*****				R3508	1-216-073-00	RES-CHIP 10K	5% 1/10W
		* A-1343-830-A DS BOARD, COMPLETE		R3509	1-216-073-00	RES-CHIP 10K	5% 1/10W
		*****		R3511	1-208-803-11	METAL CHIP 7.5K	0.5% 1/10W
				R3512	1-216-033-00	RES-CHIP 220	5% 1/10W
		<CAPACITOR>		R3513	1-216-033-00	RES-CHIP 220	5% 1/10W
C3501	1-104-664-11	ELECT 47μF	20% 25V	R3514	1-216-073-00	RES-CHIP 10K	5% 1/10W
C3502	1-104-664-11	ELECT 47μF	20% 25V	R3515	1-216-033-00	RES-CHIP 220	5% 1/10W
C3503	1-104-664-11	ELECT 47μF	20% 25V	R3518	1-216-053-00	RES-CHIP 1.5K	5% 1/10W
C3504	1-104-664-11	ELECT 47μF	20% 25V	R3519	1-216-081-00	RES-CHIP 22K	5% 1/10W
C3505	1-104-664-11	ELECT 47μF	20% 25V				
C3506	1-163-275-11	CERAMIC CHIP 0.001μF	5% 50V	R3520	1-216-081-00	RES-CHIP 22K	5% 1/10W
C3507	1-126-964-11	ELECT 10μF	20% 50V	R3521	1-216-103-00	RES-CHIP 180K	5% 1/10W
C3508	1-107-714-11	ELECT 10μF	20% 16V	R3523	1-216-099-00	RES-CHIP 120K	5% 1/10W
C3509	1-137-371-11	MYLAR 0.015μF	5% 50V	R3524	1-216-097-91	RES-CHIP 100K	5% 1/10W
C3510	1-163-038-91	CERAMIC CHIP 0.1μF	25V	R3526	1-216-039-00	RES-CHIP 390	5% 1/10W
C3511	1-163-038-91	CERAMIC CHIP 0.1μF	25V				
C3512	1-104-664-11	ELECT 47μF	20% 25V	R3529	1-216-107-00	RES-CHIP 270K	5% 1/10W
C3513	1-163-038-91	CERAMIC CHIP 0.1μF	25V	R3530	1-216-081-00	RES-CHIP 22K	5% 1/10W
C3514	1-163-038-91	CERAMIC CHIP 0.1μF	25V	R3531	1-216-041-00	RES-CHIP 470	5% 1/10W
C3515	1-104-664-11	ELECT 47μF	20% 25V	R3532	1-216-037-00	RES-CHIP 330	5% 1/10W
C3518	1-163-224-11	CERAMIC CHIP 7pF	0.25pF 50V	R3533	1-216-075-00	RES-CHIP 12K	5% 1/10W
C3519	1-104-664-11	ELECT 47μF	20% 25V				
C3520	1-137-374-11	MYLAR 0.047μF	5% 50V	R3535	1-216-097-91	RES-CHIP 100K	5% 1/10W
C3523	1-163-243-11	CERAMIC CHIP 47pF	5% 50V	R3537	1-216-081-00	RES-CHIP 22K	5% 1/10W
C3525	1-104-664-11	ELECT 47μF	20% 25V	R3538	1-216-073-00	RES-CHIP 10K	5% 1/10W
C3526	1-104-664-11	ELECT 47μF	20% 25V	R3541	1-216-079-00	RES-CHIP 18K	5% 1/10W
C3528	1-107-714-11	ELECT 10μF	20% 16V	*****			
C3529	1-164-161-11	CERAMIC CHIP 0.0022μF	10% 50V				
		<CONNECTOR>					
CN3501	* 1-691-632-21	CONNECTOR, BOARD TO BOARD 15P					
		<DIODE>					
D3501	8-719-158-15	DIODE RD5.6S-B					
D3502	8-719-914-44	DIODE DAP202K					
D3503	8-719-158-15	DIODE RD5.6S-B					
		<IC>					
IC3502	8-759-251-31	IC CA0007AM					
IC3503	8-759-251-31	IC CA0007AM					
IC3504	8-759-251-31	IC CA0007AM					
IC3505	8-759-711-28	IC NJM2058D					
IC3506	8-759-100-96	IC μPC4558G2					
		<RESISTOR>					
R3501	1-216-073-00	RES-CHIP 10K	5% 1/10W				

* A-1346-923-A D BOARD, COMPLETE (ES48)
* A-1346-924-A D BOARD, COMPLETE (ES53)
* A-1346-925-A D BOARD, COMPLETE (ES61)
* A-1346-937-A D BOARD, COMPLETE (ES43)

1-500-048-11 FERRITE 0μH (Q5104)
4-363-414-00 SPACER, MICA (IC5302, Q5104)
4-382-854-11 SCREW (M3X10), P, SW (+)
(D5107, D5108, IC5103, IC5104, IC5105,
IC5106, IC5302, Q5104, Q5705)
* 4-393-506-01 RETAINER, TR (IC5302)
7-682-952-09 SCREW +PSW 3X16 (IC5501, IC5502)

<CAPACITOR>

C5001	1-104-664-11	ELECT 47μF	20% 16V
C5002	1-126-963-11	ELECT 4.7μF	20% 50V
C5011	1-126-934-11	ELECT 220μF	20% 16V
C5020	1-126-961-11	ELECT 2.2μF	20% 50V
C5102	1-102-973-00	CERAMIC 100pF	5% 50V
C5103	1-126-960-11	ELECT 1μF	20% 50V
C5104	1-137-415-11	MYLAR 0.0068μF	10% 100V
C5105	1-102-973-00	CERAMIC 100pF	5% 50V
C5112	1-162-117-00	CERAMIC 100pF	10% 500V
C5113	1-136-207-11	MYLAR 0.047μF	10% 250V
C5115	1-124-347-51	ELECT 100μF	20% 160V
C5117	1-162-116-00	CERAMIC 680pF	10% 2KV



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C5118	1-137-391-11	MYLAR	0.0047μF 5% 100V	C5224	1-126-967-11	ELECT	47μF 20% 50V
C5119	1-162-116-00	CERAMIC	680pF 10% 2KV	C5225	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
C5120	1-162-116-00	CERAMIC	680pF 10% 2KV				
C5123	1-129-718-00	FILM	0.022μF 5% 630V	C5226	1-164-161-11	CERAMIC CHIP	0.0022μF 10% 50V
C5127	1-117-643-11	FILM	9100pF 3% 1.2KV	C5301	1-104-664-11	ELECT	47μF 20% 25V
C5130	1-115-521-11	FILM	0.82μF 5% 250V	C5302	1-104-665-11	ELECT	100μF 20% 25V
C5133	1-104-665-11	ELECT	100μF 20% 25V	C5303	1-126-933-11	ELECT	100μF 20% 16V
C5135	1-164-161-11	CERAMIC CHIP	0.0022μF 10% 50V	C5304	1-163-005-11	CERAMIC CHIP	470pF 10% 50V
C5136	1-164-161-11	CERAMIC CHIP	0.0022μF 10% 50V	C5305	1-137-399-11	MYLAR	0.1μF 5% 100V
C5137	1-137-043-11	MYLAR	0.0047μF 10% 400V	C5307	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C5138	1-126-965-11	ELECT	22μF 20% 50V	C5308	1-126-960-11	ELECT	1μF 20% 50V
C5141	1-136-189-00	MYLAR	0.1μF 10% 250V	C5310	1-126-964-11	ELECT	10μF 20% 50V
C5142	1-162-117-00	CERAMIC	100pF 10% 500V	C5311	1-136-177-00	MYLAR	1μF 5% 50V
C5143	1-115-521-11	FILM	0.82μF 5% 250V	C5312	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
C5145	1-104-665-11	ELECT	100μF 20% 25V	C5313	1-126-933-11	ELECT	100μF 20% 16V
C5146	1-107-655-11	ELECT	47μF 20% 250V	C5314	1-126-969-11	ELECT	220μF 20% 50V
C5147	1-102-228-00	CERAMIC	470pF 10% 500V	C5315	1-126-964-11	ELECT	10μF 20% 50V
C5148	1-126-941-11	ELECT	470μF 20% 25V	C5316	1-137-401-11	MYLAR	0.22μF 10% 100V
C5149	1-126-941-11	ELECT	470μF 20% 25V	C5317	1-104-664-11	ELECT	47μF 20% 16V
C5150	1-164-161-11	CERAMIC CHIP	0.0022μF 10% 50V	C5318	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
C5151	1-164-161-11	CERAMIC CHIP	0.0022μF 10% 50V	C5319	1-126-941-11	ELECT	470μF 20% 25V
C5152	1-126-972-11	ELECT	1000μF 20% 50V	C5320	1-126-972-11	ELECT	1000μF 20% 50V
C5153	1-126-972-11	ELECT	1000μF 20% 50V	C5321	1-163-243-11	CERAMIC CHIP	47pF 5% 50V
C5158	1-124-347-51	ELECT	100μF 20% 160V	C5323	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
C5159	1-126-935-11	ELECT	470μF 20% 16V	C5326	1-126-972-11	ELECT	1000μF 20% 50V
C5160	1-126-935-11	ELECT	470μF 20% 16V	C5327	1-163-251-11	CERAMIC CHIP	100pF 5% 50V
C5163	1-164-161-11	CERAMIC CHIP	0.0022μF 10% 50V	C5328	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
C5164	1-164-161-11	CERAMIC CHIP	0.0022μF 10% 50V	C5329	1-163-251-11	CERAMIC CHIP	100pF 5% 50V
C5165	1-126-967-11	ELECT	47μF 20% 50V	C5331	1-126-960-11	ELECT	1μF 20% 50V
C5166	1-107-909-11	ELECT	47μF 20% 50V	C5332	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
C5167	1-126-967-11	ELECT	47μF 20% 50V	C5333	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V
C5168	1-107-909-11	ELECT	47μF 20% 50V	C5334	1-126-960-11	ELECT	1μF 20% 50V
C5170	1-163-037-11	CERAMIC CHIP	0.022μF 10% 50V	C5401	1-126-967-11	ELECT	47μF 20% 50V
C5171	1-106-387-00	MYLAR	0.068μF 10% 200V	C5402	1-104-664-11	ELECT	47μF 20% 25V
C5172	1-163-037-11	CERAMIC CHIP	0.022μF 10% 50V	C5403	1-102-125-00	CERAMIC	0.0047μF 10% 50V
C5173	1-163-037-11	CERAMIC CHIP	0.022μF 10% 50V	C5404	1-102-125-00	CERAMIC	0.0047μF 10% 50V
C5174	1-163-037-11	CERAMIC CHIP	0.022μF 10% 50V	C5405	1-102-125-00	CERAMIC	0.0047μF 10% 50V
C5175	1-126-967-11	ELECT	47μF 20% 50V	C5406	1-104-664-11	ELECT	47μF 20% 25V
C5176	1-126-967-11	ELECT	47μF 20% 50V	C5407	1-130-495-00	MYLAR	0.1μF 5% 50V
C5204	1-126-933-11	ELECT	100μF 20% 16V	C5507	1-102-973-00	CERAMIC	100pF 5% 50V
C5205	1-130-495-00	MYLAR	0.1μF 5% 50V	C5508	1-102-973-00	CERAMIC	100pF 5% 50V
C5206	1-126-960-11	ELECT	1μF 20% 50V	C5509	1-102-973-00	CERAMIC	100pF 5% 50V
C5207	1-126-965-11	ELECT	22μF 20% 50V	C5510	1-102-973-00	CERAMIC	100pF 5% 50V
C5208	1-163-037-11	CERAMIC CHIP	0.022μF 10% 50V	C5511	1-102-973-00	CERAMIC	100pF 5% 50V
C5209	1-163-275-11	CERAMIC CHIP	0.001μF 5% 50V	C5512	1-102-973-00	CERAMIC	100pF 5% 50V
C5211	1-130-495-00	MYLAR	0.1μF 5% 50V	C5517	1-126-965-11	ELECT	22μF 20% 50V
C5214	1-126-935-11	ELECT	470μF 20% 16V	C5518	1-126-965-11	ELECT	22μF 20% 50V
C5215	1-126-964-11	ELECT	10μF 20% 50V	C5519	1-126-969-11	ELECT	220μF 20% 50V
C5216	1-164-096-11	CERAMIC	0.01μF 50V	C5520	1-126-969-11	ELECT	220μF 20% 50V
C5217	1-164-096-11	CERAMIC	0.01μF 50V	C5521	1-130-495-00	MYLAR	0.1μF 5% 50V
C5218	1-164-096-11	CERAMIC	0.01μF 50V	C5522	1-130-495-00	MYLAR	0.1μF 5% 50V
C5219	1-164-096-11	CERAMIC	0.01μF 50V	C5523	1-126-971-11	ELECT	470μF 20% 50V
C5220	1-164-096-11	CERAMIC	0.01μF 50V	C5524	1-126-971-11	ELECT	470μF 20% 50V
C5221	1-164-096-11	CERAMIC	0.01μF 50V	C5527	1-126-969-11	ELECT	220μF 20% 50V
C5222	1-164-096-11	CERAMIC	0.01μF 50V	C5528	1-126-969-11	ELECT	220μF 20% 50V
C5223	1-126-960-11	ELECT	1μF 20% 50V	C5529	1-137-150-11	MYLAR	0.01μF 5% 50V
				C5530	1-137-150-11	MYLAR	0.01μF 5% 50V



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C5711	1-136-165-00	MYLAR	0.1μF 5% 50V	D5202	8-719-109-85	DIODE RD5.1ESB2	
C5712	1-136-177-00	MYLAR	1μF 5% 50V	D5203	8-719-923-86	DIODE MTZJ-T-77-15	
C5713	1-104-665-11	ELECT	100μF 20% 25V	D5204	8-719-921-63	DIODE MTZJ-7.5B	
C5714	1-130-471-00	MYLAR	0.001μF 5% 50V	D5205	8-719-991-33	DIODE 1SS133T-77	
C5715	1-137-150-11	MYLAR	0.01μF 5% 50V	D5207	8-719-991-33	DIODE 1SS133T-77	
C5716	1-104-665-11	ELECT	100μF 20% 25V	D5208	8-719-991-33	DIODE 1SS133T-77	
C5717	1-126-968-11	ELECT	100μF 20% 50V	D5301	8-719-923-86	DIODE MTZJ-T-77-15	
C5718	1-162-114-00	CERAMIC	0.0047μF 2KV	D5302	8-719-991-33	DIODE 1SS133T-77	
C5719	1-126-968-11	ELECT	100μF 20% 50V	D5303	8-719-908-03	DIODE GP08D	
C5720	1-137-372-11	MYLAR	0.022μF 5% 50V	D5304	8-719-908-03	DIODE GP08D	
C5721	1-104-661-91	ELECT	330μF 20% 16V	D5305	8-719-991-33	DIODE 1SS133T-77	
C5722	1-126-934-11	ELECT	220μF 20% 16V	D5306	8-719-923-86	DIODE MTZJ-T-77-15	
C5727	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	D5307	8-719-923-86	DIODE MTZJ-T-77-15	
C5728	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	D5308	8-719-924-16	DIODE MTZJ-T-77-24	
C5759	1-126-964-11	ELECT	10μF 20% 50V	D5309	8-719-924-16	DIODE MTZJ-T-77-24	
C5760	1-164-182-11	CERAMIC CHIP	0.0033μF 10% 50V	D5401	8-719-110-17	DIODERD10ESB2	
<CONNECTOR>				D5402	8-719-982-96	DIODE MTZJ-T-77-2.2A	
CN5001	*1-564-506-11	PLUG, CONNECTOR 3P		D5701	8-719-991-33	DIODE 1SS133T-77	
CN5002	*1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P		D5704	8-719-991-33	DIODE 1SS133T-77	
CN5003	*1-506-371-00	PIN, CONNECTOR 2P		D5719	8-719-923-86	DIODE MTZJ-T-77-15	
CN5004	1-695-915-11	TAB (CONTACT)		D5721	8-719-923-86	DIODE MTZJ-T-77-15	
CN5006	*1-564-512-11	PLUG, CONNECTOR 9P		D5724	8-719-018-82	DIODE RGP02-20EL-6394	
CN5007	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P		D5726	8-719-991-33	DIODE 1SS133T-77	
CN5008	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P		D5727	8-719-991-33	DIODE 1SS133T-77	
CN5009	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P		D5732	8-719-991-33	DIODE 1SS133T-77	
CN5010	*1-564-507-11	PLUG, CONNECTOR 4P		<FERRITBEAD>			
CN5011	*1-564-507-11	PLUG, CONNECTOR 4P		FB5102	1-412-911-11	FERRITE	0μH
CN5012	*1-564-507-11	PLUG, CONNECTOR 4P		FB5103	1-412-911-11	FERRITE	0μH
CN5013	*1-764-333-11	PLUG, CONNECTOR 10P		<IC>			
CN5014	*1-691-135-11	PIN, CONNECTOR (PC BOARD) 4P		IC5103	8-759-701-79	IC NJM7812FA	
CN5015	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P		IC5104	8-759-929-65	IC LM7912CT	
CN5016	1-900-903-64	CONNECTOR ASSY 20P		IC5105	8-759-701-56	IC NJM78M05FA	
CN5017	1-900-903-64	CONNECTOR ASSY 20P		IC5106	8-759-701-84	IC NJM7905FA	
CN5018	*1-564-511-11	PLUG, CONNECTOR 8P		IC5107	8-759-701-59	IC NJM78M09FA	
CN5019	*1-564-507-11	PLUG, CONNECTOR 4P		IC5201	8-759-085-67	IC LM339NS	
CN5020	*1-564-506-11	PLUG, CONNECTOR 3P		IC5301	8-759-251-31	IC CA0007AM	
CN5402	*1-691-616-21	CONNECTOR, BOARD TO BOARD 15P		IC5302	8-759-192-71	IC STV9379	
<DIODE>				IC5303	8-759-998-98	IC LM358D	
D5001	8-719-991-33	DIODE 1SS133T-77		IC5401	8-759-711-28	IC NJM2058D	
D5002	8-719-991-33	DIODE 1SS133T-77		IC5501	8-749-014-67	IC STK392-020	
D5006	8-719-991-33	DIODE 1SS133T-77		IC5502	8-749-014-67	IC STK392-020	
D5008	8-719-991-33	DIODE 1SS133T-77		IC5703	8-759-711-28	IC NJM2058D	
D5101	8-719-983-38	DIODE MTZJ-T-77-36B		<CHIP CONDUCTOR>			
D5107	8-719-979-99	DIODE ERD08M-15		JR5301	1-216-295-91	SHORT	0
D5108	8-719-052-09	DIODE FMG-36S-LF024-104		JR5303	1-216-295-91	SHORT	0
D5114	8-719-971-20	DIODE ERC38-06		<COIL>			
D5115	8-719-302-43	DIODE EL1Z		L5101	1-406-665-11	INDUCTOR	100μH
D5116	8-719-979-85	DIODE EGP20G		L5105	1-459-111-00	INDUCTOR	10mH
D5117	8-719-302-43	DIODE EL1Z		L5107	1-412-533-21	INDUCTOR	47μH
D5118	8-719-979-85	DIODE EGP20G					
D5121	8-719-979-85	DIODE EGP20G					
D5122	8-719-979-85	DIODE EGP20G					
D5201	8-719-991-33	DIODE 1SS133T-77					

D

The components identified by shading
and mark $\triangle$ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L5108	1-412-533-21	INDUCTOR	47 μ H	<RESISTOR>			
L5109	1-412-519-11	INDUCTOR	3.3 μ H	R5004	1-216-089-91	RES-CHIP	47K 5% 1/10W
L5201	1-414-187-11	INDUCTOR	47 μ H	R5013	1-216-089-91	RES-CHIP	47K 5% 1/10W
L5301	1-412-524-11	INDUCTOR	8.2 μ H	R5023	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
L5501	1-412-533-21	INDUCTOR	47 μ H	R5048	1-216-041-00	RES-CHIP	470 5% 1/10W
L5502	1-412-533-21	INDUCTOR	47 μ H	R5101	1-215-926-00	METAL OXIDE	33K 5% 3W
L5503	1-412-533-21	INDUCTOR	47 μ H	R5112	1-247-843-11	CARBON	3.3K 5% 1/4W
L5504	1-412-533-21	INDUCTOR	47 μ H	R5115	1-216-435-11	METAL OXIDE	2.7K 5% 1W
<NEON LAMP>				R5119	1-215-922-11	METAL OXIDE	6.8K 5% 3W
NL5101	1-517-778-21	LAMP, NEON		R5120	1-216-486-00	METAL OXIDE	8.2K 5% 3W
NL5102	1-517-778-21	LAMP, NEON		R5122	1-215-905-11	METAL OXIDE	10 5% 3W
NL5103	1-517-778-21	LAMP, NEON		R5136	1-215-443-00	METAL	8.2K 1% 1/4W
NL5402	1-517-778-21	LAMP, NEON		R5138	1-215-457-00	METAL	33K 1% 1/4W
<IC LINK>				R5139	1-216-391-11	METAL OXIDE	1.5 5% 3W
PS5101 $\triangle$	1-533-590-31	LINK, IC (1A/90V AC, 60V DC)		R5140	1-215-449-00	METAL	15K 1% 1/4W
PS5501 $\triangle$	1-533-597-31	LINK, IC (5A/90V AC, 60V DC)		R5141	1-215-911-11	METAL OXIDE	100 5% 3W
PS5502 $\triangle$	1-533-597-31	LINK, IC (5A/90V AC, 60V DC)		R5146	1-215-910-00	METAL OXIDE	68 5% 3W
PS5503 $\triangle$	1-533-597-31	LINK, IC (5A/90V AC, 60V DC)		R5147	1-215-910-00	METAL OXIDE	68 5% 3W
PS5504 $\triangle$	1-533-597-31	LINK, IC (5A/90V AC, 60V DC)		R5148	1-249-377-11	CARBON	0.47 5% 1/4W
PS5539 $\triangle$	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		R5149	1-247-807-31	CARBON	100 5% 1/4W
PS5540 $\triangle$	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		R5152	1-216-377-11	METAL OXIDE	4.7 5% 2W
PS5543 $\triangle$	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		R5153	1-249-379-11	CARBON	0.68 5% 1/4W
PS5544 $\triangle$	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		R5154	1-260-127-11	CARBON	220K 5% 1/2W
PS5549 $\triangle$	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		R5155	1-214-909-00	METAL	68K 1% 1/2W
PS5550 $\triangle$	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		R5157	1-215-908-00	METAL OXIDE	33 5% 3W (ES43,ES48)
<TRANSISTOR>				R5157	1-216-474-11	METAL OXIDE	33 5% 3W (ES53)
Q5006	1-801-806-11	TRANSISTOR DTC144EKA		R5157	1-216-472-00	METAL OXIDE	33 5% 3W (ES61)
Q5009	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R5158	1-216-349-00	METAL OXIDE	1 5% 1W
Q5102	8-729-119-80	TRANSISTOR 2SC2688-LK		R5159	1-215-908-00	METAL OXIDE	33 5% 3W (ES43,ES48)
Q5104	8-729-051-81	TRANSISTOR 2SC5047-YB		R5159	1-216-474-11	METAL OXIDE	33 5% 3W (ES53)
Q5105	8-729-038-83	TRANSISTOR 2SK2251-01-F19		R5159	1-216-472-00	METAL OXIDE	33 5% 3W (ES61)
Q5106	8-729-119-76	TRANSISTOR 2SA1175-HFE		R5160	1-249-377-11	CARBON	0.47 5% 1/4W
Q5201	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R5161	1-249-377-11	CARBON	0.47 5% 1/4W
Q5302	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R5162	1-216-393-00	METAL OXIDE	2.2 5% 3W
Q5303	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R5163	1-216-392-11	METAL OXIDE	1.8 5% 3W
Q5401	8-729-422-27	TRANSISTOR 2SD601A-Q		R5164	1-249-393-11	CARBON	10 5% 1/4W
Q5402	8-729-216-22	TRANSISTOR 2SA1162-G		R5166	1-215-905-11	METAL OXIDE	10 5% 3W
Q5403	1-801-806-11	TRANSISTOR DTC144EKA		R5169	1-249-424-11	CARBON	3.9K 5% 1/4W
Q5501	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA		R5171	1-249-429-11	CARBON	10K 5% 1/4W
Q5502	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA		R5172	1-249-417-11	CARBON	1K 5% 1/4W
Q5503	8-729-119-76	TRANSISTOR 2SA1175-HFE		R5173	1-215-905-11	METAL OXIDE	10 5% 3W
Q5504	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA		R5174	1-215-905-11	METAL OXIDE	10 5% 3W
Q5505	8-729-119-76	TRANSISTOR 2SA1175-HFE		R5175	1-215-905-11	METAL OXIDE	10 5% 3W
Q5506	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA		R5201	1-216-059-00	RES-CHIP	2.7K 5% 1/10W
Q5704	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA		R5202	1-216-049-91	RES-CHIP	1K 5% 1/10W
Q5705	8-729-053-73	TRANSISTOR 2SC5022		R5203	1-215-879-11	METAL OXIDE	47K 5% 1W
Q5706	8-729-119-76	TRANSISTOR 2SA1175-HFE		R5204	1-216-059-00	RES-CHIP	2.7K 5% 1/10W
Q5707	8-729-823-81	TRANSISTOR 2SC4632LS-CB7		R5205	1-216-059-00	RES-CHIP	2.7K 5% 1/10W
Q5710	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R		R5206	1-208-837-11	METAL CHIP	200K 0.5% 1/10W
Q5711	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R5209	1-208-760-11	METAL CHIP	120 0.5% 1/10W
				R5210	1-216-113-00	RES-CHIP	470K 5% 1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R5211	1-216-081-00	RES-CHIP	22K 5% 1/10W	R5340	1-249-377-11	CARBON 0.47 5% 1/4W	
R5212	1-216-071-00	RES-CHIP	8.2K 5% 1/10W	R5341	1-249-377-11	CARBON 0.47 5% 1/4W	
R5213	1-216-089-91	RES-CHIP	47K 5% 1/10W	R5344	1-216-117-00	RES-CHIP 680K 5% 1/10W	
R5214	1-216-073-00	RES-CHIP	10K 5% 1/10W	R5345	1-216-117-00	RES-CHIP 680K 5% 1/10W	
R5215	1-216-089-91	RES-CHIP	47K 5% 1/10W				
R5216	1-247-895-91	CARBON	470K 5% 1/4W	R5401	1-216-295-91	SHORT 0	
R5217	1-216-071-00	RES-CHIP	8.2K 5% 1/10W	R5405	1-260-087-11	CARBON 100 5% 1/2W	
R5218	1-216-049-91	RES-CHIP	1K 5% 1/10W	R5406	1-216-295-91	SHORT 0	
R5219	1-216-075-00	RES-CHIP	12K 5% 1/10W	R5408	1-216-295-91	SHORT 0	
R5220	1-216-105-91	RES-CHIP	220K 5% 1/10W	R5409	1-216-295-91	SHORT 0	
R5221	1-216-061-00	RES-CHIP	3.3K 5% 1/10W	R5410	1-260-087-11	CARBON 100 5% 1/2W	
R5222	1-216-105-91	RES-CHIP	220K 5% 1/10W	R5411	1-216-295-91	SHORT 0	
R5223	1-216-081-00	RES-CHIP	22K 5% 1/10W	R5412	1-208-812-11	METAL CHIP 18K 0.5% 1/10W	
R5224	1-249-405-11	CARBON	100 5% 1/4W	R5415	1-216-067-00	RES-CHIP 5.6K 5% 1/10W	
R5225	1-208-806-11	METAL CHIP	10K 0.5% 1/10W	R5416	1-216-295-91	SHORT 0	
R5226	1-216-089-91	RES-CHIP	47K 5% 1/10W	R5419	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R5227	1-260-135-11	CARBON	1M 5% 1/2W	R5420	1-216-077-91	RES-CHIP 15K 5% 1/10W	
R5229	1-216-045-00	RES-CHIP	680 5% 1/10W	R5421	1-216-081-00	RES-CHIP 22K 5% 1/10W	
R5230	1-216-097-91	RES-CHIP	100K 5% 1/10W	R5422	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R5231	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	R5501	1-247-807-31	CARBON 100 5% 1/4W	
R5232	1-216-089-91	RES-CHIP	47K 5% 1/10W	R5502	1-247-807-31	CARBON 100 5% 1/4W	
R5233	1-247-807-31	CARBON	100 5% 1/4W	R5503	1-247-807-31	CARBON 100 5% 1/4W	
R5234	1-216-049-91	RES-CHIP	1K 5% 1/10W	R5504	1-247-807-31	CARBON 100 5% 1/4W	
R5235	1-208-810-11	METAL CHIP	15K 0.5% 1/10W	R5505	1-247-807-31	CARBON 100 5% 1/4W	
R5236	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	R5506	1-247-807-31	CARBON 100 5% 1/4W	
R5302	1-216-073-00	RES-CHIP	10K 5% 1/10W	R5507	1-247-843-11	CARBON 3.3K 5% 1/4W	
R5303	1-216-083-00	RES-CHIP	27K 5% 1/10W	R5508	1-247-843-11	CARBON 3.3K 5% 1/4W	
R5304	1-216-081-00	RES-CHIP	22K 5% 1/10W	R5509	1-247-843-11	CARBON 3.3K 5% 1/4W	
R5305	1-208-801-11	METAL CHIP	6.2K 0.5% 1/10W	R5510	1-247-843-11	CARBON 3.3K 5% 1/4W	
R5306	1-208-806-11	METAL CHIP	10K 0.5% 1/10W	R5511	1-249-417-11	CARBON 1K 5% 1/4W	
R5307	1-216-089-91	RES-CHIP	47K 5% 1/10W	R5512	1-249-417-11	CARBON 1K 5% 1/4W	
R5308	1-216-353-00	METAL OXIDE	2.2 5% 1W	R5513	1-247-843-11	CARBON 3.3K 5% 1/4W	
R5309	1-216-097-91	RES-CHIP	100K 5% 1/10W	R5515	1-247-843-11	CARBON 3.3K 5% 1/4W	
R5310	1-216-353-00	METAL OXIDE	2.2 5% 1W	R5517	1-249-417-11	CARBON 1K 5% 1/4W	
R5311	1-216-073-00	RES-CHIP	10K 5% 1/10W	R5518	1-249-417-11	CARBON 1K 5% 1/4W	
R5312	1-216-073-00	RES-CHIP	10K 5% 1/10W	R5519	1-249-429-11	CARBON 10K 5% 1/4W	
R5313	1-216-083-00	RES-CHIP	27K 5% 1/10W	R5520	1-249-429-11	CARBON 10K 5% 1/4W	
R5314	1-216-073-00	RES-CHIP	10K 5% 1/10W	R5521	1-214-808-11	METAL 4.7 1% 1/2W	
R5315	1-215-913-11	METAL OXIDE	220 5% 3W	R5522	1-214-808-11	METAL 4.7 1% 1/2W	
R5316	1-216-089-91	RES-CHIP	47K 5% 1/10W	R5523	1-247-807-31	CARBON 100 5% 1/4W	
R5317	1-216-049-91	RES-CHIP	1K 5% 1/10W	R5524	1-249-429-11	CARBON 10K 5% 1/4W	
R5318	1-216-097-91	RES-CHIP	100K 5% 1/10W	R5525	1-214-808-11	METAL 4.7 1% 1/2W	
R5319	1-216-085-00	RES-CHIP	33K 5% 1/10W	R5526	1-247-807-31	CARBON 100 5% 1/4W	
R5320	1-249-383-11	CARBON	1.5 5% 1/4W	R5527	1-214-808-11	METAL 4.7 1% 1/2W	
R5321	1-216-089-91	RES-CHIP	47K 5% 1/10W	R5528	1-249-429-11	CARBON 10K 5% 1/4W	
R5323	1-216-083-00	RES-CHIP	27K 5% 1/10W	R5529	1-214-808-11	METAL 4.7 1% 1/2W	
R5325	1-208-801-11	METAL CHIP	6.2K 0.5% 1/10W	R5530	1-214-808-11	METAL 4.7 1% 1/2W	
R5326	1-208-806-11	METAL CHIP	10K 0.5% 1/10W	R5531	1-249-417-11	CARBON 1K 5% 1/4W	
R5328	1-216-089-91	RES-CHIP	47K 5% 1/10W	R5532	1-249-417-11	CARBON 1K 5% 1/4W	
R5329	1-216-025-91	RES-CHIP	100 5% 1/10W	R5533	1-214-808-11	METAL 4.7 1% 1/2W	
R5330	1-216-295-91	SHORT	0	R5534	1-214-808-11	METAL 4.7 1% 1/2W	
R5331	1-216-073-00	RES-CHIP	10K 5% 1/10W	R5535	1-214-808-11	METAL 4.7 1% 1/2W	
R5335	1-216-117-00	RES-CHIP	680K 5% 1/10W	R5536	1-214-808-11	METAL 4.7 1% 1/2W	
R5337	1-216-117-00	RES-CHIP	680K 5% 1/10W	R5537	1-214-808-11	METAL 4.7 1% 1/2W	
R5338	1-216-295-91	SHORT	0	R5538	1-214-808-11	METAL 4.7 1% 1/2W	
R5339	1-247-807-31	CARBON	100 5% 1/4W	R5541	1-214-808-11	METAL 4.7 1% 1/2W	
				R5542	1-214-808-11	METAL 4.7 1% 1/2W	

**KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1 RM-961**

D G1, G

* The components identified by **D** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

The components identified by shading and mark **△** are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R5545	1-214-808-11	METAL	4.7 1% 1/2W	R5763	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R5546	1-214-808-11	METAL	4.7 1% 1/2W	R5768	1-249-429-11	CARBON	10K 5% 1/4W
R5547	1-214-808-11	METAL	4.7 1% 1/2W				
R5548	1-214-808-11	METAL	4.7 1% 1/2W	R5769	1-216-073-00	RES-CHIP	10K 5% 1/10W
R5551	1-214-808-11	METAL	4.7 1% 1/2W	R5770	1-216-073-00	RES-CHIP	10K 5% 1/10W
R5552	1-214-808-11	METAL	4.7 1% 1/2W	R5771	1-216-097-91	RES-CHIP	100K 5% 1/10W
R5553	1-214-808-11	METAL	4.7 1% 1/2W	R5772	1-249-429-11	CARBON	10K 5% 1/4W
R5554	1-214-808-11	METAL	4.7 1% 1/2W	△R9901		METAL	1/4W
R5555	1-214-808-11	METAL	4.7 1% 1/2W			<SPARK GAP>	
R5556	1-214-808-11	METAL	4.7 1% 1/2W	SG5702	1-519-466-11	GAP, SPARK	
R5557	1-214-808-11	METAL	4.7 1% 1/2W			<TRANSFORMER>	
R5558	1-214-808-11	METAL	4.7 1% 1/2W	T5101	1-437-209-11	TRANSFORMER, HORIZONTAL DRIVE	
R5559	1-214-808-11	METAL	4.7 1% 1/2W	T5102	1-419-553-11	COIL, HORIZONTAL LINEARITY (HLC)	
				T5103	△1-453-335-11	TRANSFORMER ASSY, FLY BACK	
R5560	1-214-808-11	METAL	4.7 1% 1/2W			(NX-4010//M3P4)	
R5561	1-214-808-11	METAL	4.7 1% 1/2W	T5104	1-435-439-11	TRANSFORMER, FERRITE (PMT)	
R5562	1-214-808-11	METAL	4.7 1% 1/2W			*****	
R5563	1-249-429-11	CARBON	10K 5% 1/4W			* A-1316-514-A G1 BOARD, COMPLETE (ES43ME1/MN1,	
R5564	1-249-429-11	CARBON	10K 5% 1/4W			ES48ME1/MN1, ES53ME1/MN1,	
						ES61ME1/MN1)	
R5565	1-249-429-11	CARBON	10K 5% 1/4W			* A-1316-528-A G BOARD, COMPLETE (ES43HK1/SN1,	
R5566	1-249-429-11	CARBON	10K 5% 1/4W			ES48HK1/SN1, ES53HK1/SN1,	
R5568	1-249-429-11	CARBON	10K 5% 1/4W			ES61HK1/SN1)	
R5569	1-249-429-11	CARBON	10K 5% 1/4W			*****	
						* 1-533-725-11 HOLDER, FUSE (F6001)	
R5570	1-249-429-11	CARBON	10K 5% 1/4W			* 4-374-846-01 COVER, CAPACITOR, CAP TYPE	
R5723	1-216-073-00	RES-CHIP	10K 5% 1/10W			(VD6001, VD6002)	
R5724	1-247-807-31	CARBON	100 5% 1/4W			4-382-854-11 SCREW (M3X10), P, SW (+)	
R5725	1-216-093-91	RES-CHIP	68K 5% 1/10W			(D6015 : G BOARD, D6301, D6302, D6304,	
R5726	1-216-071-00	RES-CHIP	8.2K 5% 1/10W			D6308, D6309, IC6004)	
						<CAPACITOR>	
R5727	1-216-085-00	RES-CHIP	33K 5% 1/10W	C6000	△1-104-708-51	MYLAR	0.47μF 20% 250V
R5728	1-216-051-00	RES-CHIP	1.2K 5% 1/10W	C6001	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
R5729	1-216-025-91	RES-CHIP	100 5% 1/10W			(ES43ME1/MN1, ES48ME1/MN1,	
R5730	1-249-431-11	CARBON	15K 5% 1/4W			ES53ME1/MN1, ES61ME1/MN1)	
R5731	1-216-073-00	RES-CHIP	10K 5% 1/10W	C6003	△1-104-706-51	MYLAR	0.22μF 20% 250V
				C6006	1-126-961-11	ELECT	2.2μF 20% 50V
R5732	1-249-441-11	CARBON	100K 5% 1/4W			(ES43ME1/MN1, ES48ME1/MN1,	
R5734	1-216-061-00	RES-CHIP	3.3K 5% 1/10W			ES53ME1/MN1, ES61ME1/MN1)	
R5735	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	C6007	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
R5737	1-216-089-91	RES-CHIP	47K 5% 1/10W			(ES43ME1/MN1, ES48ME1/MN1,	
R5738	1-249-405-11	CARBON	100 5% 1/4W			ES53ME1/MN1, ES61ME1/MN1)	
				C6008	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
R5739	1-216-025-91	RES-CHIP	100 5% 1/10W			(ES43ME1/MN1, ES48ME1/MN1,	
R5740	1-215-917-11	METAL OXIDE	1K 5% 3W			ES53ME1/MN1, ES61ME1/MN1)	
R5744	1-216-089-91	RES-CHIP	47K 5% 1/10W	C6009	△1-104-706-51	MYLAR	0.22μF 20% 250V
R5745	1-216-099-00	RES-CHIP	120K 5% 1/10W	C6010	△1-119-894-51	CERAMIC	2200pF 20% 250V
R5746	1-215-925-11	METAL OXIDE	22K 5% 3W	C6011	△1-119-894-51	CERAMIC	2200pF 20% 250V
				C6013	△1-161-964-91	CERAMIC	0.0047μF 250V
R5747	1-215-925-11	METAL OXIDE	22K 5% 3W				
R5748	1-216-041-00	RES-CHIP	470 5% 1/10W	C6014	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
R5749	1-216-025-91	RES-CHIP	100 5% 1/10W			(ES43ME1/MN1, ES48ME1/MN1,	
R5750	1-216-025-91	RES-CHIP	100 5% 1/10W			ES53ME1/MN1, ES61ME1/MN1)	
R5751	1-260-099-11	CARBON	1K 5% 1/2W				
R5753	1-216-065-91	RES-CHIP	4.7K 5% 1/10W				
R5754	1-216-073-00	RES-CHIP	10K 5% 1/10W				
R5755	1-216-065-91	RES-CHIP	4.7K 5% 1/10W				
R5756	1-216-065-91	RES-CHIP	4.7K 5% 1/10W				
R5757	1-219-752-11	CARBON	100K 5% 1/2W				
R5758	1-215-925-11	METAL OXIDE	22K 5% 3W				
R5759	1-215-925-11	METAL OXIDE	22K 5% 3W				
R5762	1-219-743-11	CARBON	100 5% 1/2W				

The components identified by shading
and mark Δ are critical for safety.
Replace only with part number specified.

**KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1** RM-961

G1, G

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C6016	1-163-251-11	CERAMIC CHIP 100pF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	5% 50V	C6101	1-107-679-91	ELECT 10μF (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	20% 450V
C6017	Δ 1-161-964-51	CERAMIC 0.0047μF	250V	C6102	Δ 1-161-964-51	CERAMIC 0.0047μF	250V
C6018	Δ 1-161-964-51	CERAMIC 0.0047μF	250V	C6103	1-163-005-11	CERAMIC CHIP 470pF	10% 50V
C6019	1-126-961-11	ELECT 2.2μF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	20% 50V	C6104	1-163-009-11	CERAMIC CHIP 0.001μF	10% 50V
C6020	1-126-968-11	ELECT 100μF	20% 50V	C6105	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V
C6022	1-109-834-11	ELECT(BLOCK) 1500μF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	20% 250V	C6106	1-163-009-11	CERAMIC CHIP 0.001μF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	10% 50V
C6022	1-131-940-11	ELECT 1200μF (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	20% 250V	C6106	1-163-275-11	CERAMIC CHIP 0.001μF (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	5% 50V
C6023	1-109-834-11	ELECT(BLOCK) 1500μF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	20% 250V	C6107	1-137-605-11	MYLAR 0.01μF	10% 250V
C6023	1-131-940-11	ELECT 1200μF (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	20% 250V	C6108	Δ 1-161-964-51	CERAMIC 0.0047μF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	250V
C6024	1-117-227-11	MYLAR 1μF (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	10% 450V	C6109	1-104-665-11	ELECT 100μF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	20% 25V
C6025	1-115-389-11	FILM 0.018μF	3% 800V	C6109	1-126-965-11	ELECT 22μF (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	20% 50V
C6026	1-125-969-91	CERAMIC 680pF	10% 1KV	C6110	1-163-009-11	CERAMIC CHIP 0.001μF	10% 50V
C6027	1-115-824-11	ELECT 18μF	20% 50V	C6111	Δ 1-161-964-51	CERAMIC 0.0047μF	250V
C6028	1-104-588-11	FILM 0.0082μF	2.50%1.25KV	C6300	1-101-810-00	CERAMIC 100pF	5% 500V
C6029	1-102-106-00	CERAMIC 100pF	10% 50V	C6301	1-101-810-00	CERAMIC 100pF	5% 500V
C6030	1-136-189-00	MYLAR 0.1μF	10% 250V	C6302	1-102-114-00	CERAMIC 470pF	10% 50V
C6031	1-125-969-91	CERAMIC 680pF	10% 1KV	C6303	1-102-114-00	CERAMIC 470pF	10% 50V
C6032	1-115-405-11	FILM 0.039μF (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	3% 1KV	C6306	1-101-810-00	CERAMIC 100pF	5% 500V
C6033	1-126-963-11	ELECT 4.7μF	20% 50V	C6307	1-126-943-11	ELECT 2200μF	20% 25V
C6034	1-130-029-00	FILM 8200pF	2% 50V	C6308	1-126-937-11	ELECT 4700μF	20% 16V
C6035	1-104-665-11	ELECT 100μF	20% 25V	C6309	1-101-810-00	CERAMIC 100pF	5% 500V
C6036	1-107-906-11	ELECT 10μF	20% 50V	C6310	1-101-810-00	CERAMIC 100pF	5% 500V
C6037	1-137-150-11	MYLAR 0.01μF	5% 50V	C6311	1-104-665-11	ELECT 100μF	20% 25V
C6038	1-104-588-11	FILM 0.0082μF	2.50%1.25KV	C6312	1-104-665-11	ELECT 100μF	20% 25V
C6039	1-115-389-11	FILM 0.018μF	3% 800V	C6313	1-126-960-11	ELECT 1μF	20% 50V
C6040	1-117-227-11	MYLAR 1μF (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	10% 450V	C6314	1-128-567-51	ELECT 1000μF	20% 100V
C6041	1-163-009-11	CERAMIC CHIP 0.001μF	10% 50V	C6315	1-128-567-51	ELECT 1000μF	20% 100V
C6042	1-163-009-11	CERAMIC CHIP 0.001μF	10% 50V	C6317	1-109-954-11	ELECT 0.47μF	20% 160V
C6043	1-104-663-11	ELECT 33μF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	20% 16V	C6321	1-128-549-11	ELECT 3300μF	20% 35V
C6044	1-117-703-11	CERAMIC 0.0047μF	99% 250V	C6322	1-128-549-11	ELECT 3300μF	20% 35V
C6045	1-107-675-11	ELECT 1μF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	20% 450V	C6323	1-128-549-11	ELECT 3300μF	20% 35V
C6046	1-107-675-11	ELECT 1μF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	20% 450V	C6324	1-128-549-11	ELECT 3300μF	20% 35V
C6100	Δ 1-161-964-51	CERAMIC 0.0047μF	250V	C6325	1-126-935-11	ELECT 470μF	20% 6.3V
C6101	1-107-680-11	ELECT 22μF (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	20% 450V	C6327	1-126-968-11	ELECT 100μF	20% 50V
				C6328	1-126-968-11	ELECT 100μF	20% 50V
				C6329	1-126-943-11	ELECT 2200μF	20% 25V
				C6330	1-126-943-11	ELECT 2200μF	20% 25V
				C6331	1-107-641-11	ELECT 220μF	20% 160V
				C6332	1-104-665-11	ELECT 100μF	20% 25V
				C6333	1-104-665-11	ELECT 100μF	20% 25V
				C6334	1-126-940-11	ELECT 330μF	20% 25V
				C6335	1-126-967-11	ELECT 47μF	20% 50V
				C6337	1-101-810-00	CERAMIC 100pF	5% 500V
				C6338	1-162-117-00	CERAMIC 100pF	10% 500V
				C6339	1-104-987-11	MYLAR 0.001μF	10% 200V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C6340	1-164-004-11	CERAMIC CHIP 0.1 μ F 10% 25V (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		D6009	8-719-158-49	DIODE RD12SB2 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
C6341	1-137-150-11	MYLAR 0.01 μ F 5% 50V (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		D6010	8-719-988-61	DIODE 1SS355TE-17	
C6342	1-136-165-00	MYLAR 0.1 μ F 5% 50V (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		D6011	8-719-988-61	DIODE 1SS355TE-17 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
<CONNECTOR>				D6015	$\triangle$ 8-719-022-99	DIODE D6SB60L (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
CN6002	1-695-915-11	TAB (CONTACT)		D6015	$\triangle$ 8-719-510-53	DIODE D4SB60L (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
CN6004	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		D6017	8-719-063-73	DIODE D1NL20U-TR	
CN6004	*1-580-843-11	PIN, CONNECTOR (POWER) (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		D6019	8-719-510-02	DIODE D1NS4	
CN6006	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P		D6020	8-719-029-04	DIODE D5L60 (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
CN6007	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P		D6021	8-719-921-88	DIODE MTZJ-13B (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
CN6011	*1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P		D6021	8-719-110-36	DIODE RD13ES-B2 (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
CN6300	*1-564-508-11	PLUG, CONNECTOR 5P		D6022	8-719-979-64	DIODE UF4005PKG23	
CN6301	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		D6023	8-719-979-64	DIODE UF4005PKG23	
CN6302	*1-764-333-11	PLUG, CONNECTOR 10P		D6024	8-719-988-61	DIODE 1SS355TE-17 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
CN6303	*1-764-333-11	PLUG, CONNECTOR 10P		D6025	8-719-988-61	DIODE 1SS355TE-17 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
CN6304	*1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P		D6100	$\triangle$ 8-719-077-76	DIODE D2SB60A-F04 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
CN6306	1-695-915-11	TAB (CONTACT)		D6100	$\triangle$ 8-719-068-00	DIODE ERC04-06SE (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
CN6307	1-695-915-11	TAB (CONTACT)		D6101	8-719-068-00	DIODE ERC04-06SE (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
CN6308	1-695-915-11	TAB (CONTACT)		D6101	8-719-947-69	DIODE MTZJ-T-72-18B (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
<DIODE>				D6102	8-719-978-65	DIODE DTZ-TT11-15B	
D6000	8-719-052-90	DIODE D1NL40-TA2 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		D6103	8-719-988-61	DIODE 1SS355TE-17	
D6001	8-719-052-90	DIODE D1NL40-TA2 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		D6104	$\triangle$ 8-719-068-00	DIODE ERC04-06SE (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
D6002	8-719-988-61	DIODE 1SS355TE-17 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		D6105	8-719-948-45	DIODE ERA22-08	
D6003	8-719-158-49	DIODE RD12SB2 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		D6106	$\triangle$ 8-719-068-00	DIODE ERC04-06SE (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
D6004	8-719-991-33	DIODE 1SS133T-77 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		D6108	8-719-063-73	DIODE D1NL20U-TR (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
D6005	8-719-988-61	DIODE 1SS355TE-17 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		D6108	8-719-510-48	DIODE D1N20R (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
D6006	8-719-988-61	DIODE 1SS355TE-17 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		D6300	8-719-057-96	DIODE D10SC6M-4012	
D6007	8-719-988-61	DIODE 1SS355TE-17 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		D6301	8-719-510-12	DIODE D10SC4M	
D6008	8-719-991-33	DIODE 1SS133T-77 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)					

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q6300	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6016	1-216-081-00	RES-CHIP 22K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
Q6300	8-729-023-22	TRANSISTOR 2SD2114K (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		R6017	1-208-830-11	METAL CHIP 100K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
Q6301	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R6018	1-208-844-11	METAL CHIP 390K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
Q6302	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R					
Q6303	8-729-820-82	TRANSISTOR 2SA1208		R6019	1-208-806-11	METAL CHIP 10K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
Q6304	8-729-026-39	TRANSISTOR 2SA933AS-QT (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		R6020	1-208-827-11	METAL CHIP 75K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
<RESISTOR>				R6021	1-208-830-11	METAL CHIP 100K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6000	1-260-131-11	CARBON 470K 5% 1/2W		R6022	1-208-846-11	METAL CHIP 470K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6001	1-260-131-11	CARBON 470K 5% 1/2W		R6023	1-216-057-00	RES-CHIP 2.2K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6002	1-202-981-11	CEMENTED 0.82 5% 20W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6024	1-208-846-11	METAL CHIP 470K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6002	1-216-057-00	RES-CHIP 2.2K 5% 1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		R6025	1-216-057-00	RES-CHIP 2.2K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6003	$\triangle$ 1-219-759-91	CARBON 1M 5% 1/2W		R6026	$\triangle$ 1-218-265-21	METAL 8.2M 5% 1W	
R6004	1-208-806-11	METAL CHIP 10K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6027	1-249-389-11	CARBON 4.7 5% 1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6005	1-208-806-11	METAL CHIP 10K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6029	1-216-065-91	RES-CHIP 4.7K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6006	1-208-832-11	METAL CHIP 120K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6030	1-216-089-91	RES-CHIP 47K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6007	1-208-827-11	METAL CHIP 75K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6031	1-216-073-00	RES-CHIP 10K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6008	1-215-489-00	METAL 680K 1% 1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6033	1-216-065-91	RES-CHIP 4.7K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6009	1-215-489-00	METAL 680K 1% 1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6035	$\triangle$ 1-205-998-11	CEMENTED 1 5% 10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
R6010	1-215-489-00	METAL 680K 1% 1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6036	1-208-830-11	METAL CHIP 100K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6011	1-208-798-11	METAL CHIP 4.7K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)					
R6012	1-208-832-11	METAL CHIP 120K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6038	1-216-073-00	RES-CHIP 10K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6013	1-215-489-00	METAL 680K 1% 1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6041	1-208-822-11	METAL CHIP 47K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6014	1-215-489-00	METAL 680K 1% 1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6042	1-208-822-11	METAL CHIP 47K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6015	1-215-489-00	METAL 680K 1% 1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6043	1-216-073-00	RES-CHIP 10K 5% 1/10W	

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**KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1** RM-961

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R6044	1-216-073-00	RES-CHIP 10K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6078	1-216-073-00	RES-CHIP 10K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6045	1-208-819-11	METAL CHIP 36K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6079	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R6046	1-215-489-00	METAL 680K 1% 1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6100	1-260-298-51	CARBON 3.3 5% 1/2W	
R6047	1-215-489-00	METAL 680K 1% 1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6101	1-216-045-00	RES-CHIP 680 5% 1/10W	
R6048	1-215-489-00	METAL 680K 1% 1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6102	1-249-389-11	CARBON 4.7 5% 1/4W	
R6049	$\triangle$ 1-205-998-11	CEMENTED 1 5% 10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		R6103	1-216-009-91	RES-CHIP 22 5% 1/10W	
R6050	1-205-943-11	CEMENTED 1 5% 20W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6104	1-240-205-11	CARBON 22M 5% 1/2W	
R6051	1-208-824-11	METAL CHIP 56K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6105	1-216-097-91	RES-CHIP 100K 5% 1/10W	
R6052	1-249-417-11	CARBON 1K 5% 1/4W		R6106	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R6053	1-208-792-11	METAL CHIP 2.7K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6107	1-216-089-91	RES-CHIP 47K 5% 1/10W	
R6053	1-216-660-11	METAL CHIP 2.4K 0.5% 1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		R6108	1-215-493-00	METAL 1M 1% 1/4W	
R6054	1-208-774-11	METAL CHIP 470 0.5% 1/10W		R6109	1-216-025-91	RES-CHIP 100 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6055	1-208-805-11	METAL CHIP 9.1K 0.5% 1/10W		R6109	1-216-041-00	RES-CHIP 470 5% 1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
R6056	1-217-625-00	METAL 0.05 10% 2W		R6300	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R6057	1-215-477-00	METAL 220K 1% 1/4W		R6301	1-249-413-11	CARBON 470 5% 1/4W	
R6058	1-215-477-00	METAL 220K 1% 1/4W		R6302	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R6059	1-215-477-00	METAL 220K 1% 1/4W		R6304	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R6060	1-219-512-11	CARBON 2.2M 5% 1/2W		R6305	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R6061	$\triangle$ 1-220-886-61	FUSIBLE 0.1 10% 1W		R6306	1-216-041-00	RES-CHIP 470 5% 1/10W	
R6062	1-208-800-11	METAL CHIP 5.6K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6307	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R6062	1-208-796-11	METAL CHIP 3.9K 0.5% 1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		R6308	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R6065	1-219-512-11	CARBON 2.2M 5% 1/2W		R6309	1-249-417-11	CARBON 1K 5% 1/4W	
R6067	1-249-397-11	CARBON 22 5% 1/4W		R6310	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R6068	$\triangle$ 1-205-998-11	CEMENTED 1 5% 10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		R6311	1-215-477-00	METAL 220K 1% 1/4W	
R6069	$\triangle$ 1-205-998-11	CEMENTED 1 5% 10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		R6312	1-249-417-11	CARBON 1K 5% 1/4W	
R6071	$\triangle$ 1-240-881-11	CEMENTED 0.82 5% 10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6313	1-216-097-91	RES-CHIP 100K 5% 1/10W	
R6072	1-249-417-11	CARBON 1K 5% 1/4W		R6314	1-216-385-11	METAL OXIDE 0.47 5% 3W	
R6076	1-249-389-11	CARBON 4.7 5% 1/4W		R6316	1-215-477-00	METAL 220K 1% 1/4W	
R6077	1-216-689-11	RES-CHIP 39K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		R6317	1-249-417-11	CARBON 1K 5% 1/4W	
				R6318	1-215-453-00	METAL 22K 1% 1/4W	
				R6319	1-215-476-00	METAL 200K 1% 1/4W	
				R6320	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	
				R6321	1-208-822-11	METAL CHIP 47K 0.5% 1/10W	
				R6322	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
				R6323	1-216-041-00	RES-CHIP 470 5% 1/10W	
				R6324	1-216-049-91	RES-CHIP 1K 5% 1/10W	
				R6325	1-208-819-11	METAL CHIP 36K 0.5% 1/10W	
				R6326	1-208-798-11	METAL CHIP 4.7K 0.5% 1/10W	
				R6327	1-208-782-11	METAL CHIP 1K 0.5% 1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
				R6328	1-216-065-91	RES-CHIP 4.7K 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
				R6328	1-215-906-11	METAL OXIDE 15 5% 3W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
				R6329	1-216-041-00	RES-CHIP 470 5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	

KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1 RM-961

G1, G

The components identified by shading
and mark △ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R6329	1-208-807-11	METAL CHIP 11K 0.5% 1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)				<THERMISTOR>	
R6330	1-208-813-11	METAL CHIP 20K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)		TH6100	1-803-586-11	THERMISTOR, NTC	
R6332	1-208-819-11	METAL CHIP 36K 0.5% 1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)				<VARISTOR>	
R6333	1-208-806-11	METAL CHIP 10K 0.5% 1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		VD6000	1-803-614-11	VARISTOR (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
R6334	1-216-041-00	RES-CHIP 470 5% 1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)		VD6001△	1-803-830-51	VARISTOR (ERZV14D621)	
				VD6002△	1-803-830-51	VARISTOR (ERZV14D621)	

						MISCELLANEOUS	

R6335	1-216-071-00	RES-CHIP 8.2K 5% 1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)				△1-223-925-11 RESISTOR ASSY (HIGH-VOLTAGE) (FOCUS PACK)	
R6336	1-208-802-11	METAL CHIP 6.8K 0.5% 1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)				△1-452-790-41 NECK ASSY (NA-295)	
						1-528-864-11 BATTERY, SOLAR	
						1-529-403-11 SPEAKER (6.6 CM) (ES48, ES53)	
						1-529-405-11 SPEAKER (13 CM) (ES53)	
						1-529-643-11 SPEAKER (13 CM) (ES48)	
						1-529-757-11 SPEAKER (2.7 CM) (ES61)	
						1-529-758-11 SPEAKER (8 CM) (ES61)	
						1-529-759-11 SPEAKER (16 CM) (ES61)	
						1-529-791-11 SPEAKER (10 CM) (ES43)	
						1-529-792-11 SPEAKER (12 CM) (ES43)	
						1-543-982-11 CORE, FERRITE	
RY6000△	1-755-357-11	RELAY, AC POWER (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)				△1-574-062-52 CORD, POWER (WITH CONNECTOR) (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
RY6000△	1-755-352-11	RELAY, AC POWER (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)				*1-761-348-11 PWB, MOUNTED (NET WORK) (ES43)	
RY6001△	1-755-357-11	RELAY, AC POWER (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)				1-790-082-11 CABLE, RF	
						△1-792-002-11 CORD, POWER (WITH FILTER) (ES43HK1, ES48HK1, ES53HK1, ES61HK1)	
						△1-792-035-11 CORD, POWER (WITH FILTER) (ES43SN1, ES48SN1, ES53SN1, ES61SN1)	
						△8-598-955-12 BLOCK ASSY, HIGH-VOLTAGE	
						△8-733-570-15 PICTURE TUBE 07MXC2 (G) (HEATER)	
						△8-733-571-15 PICTURE TUBE 07MXC2 (R) (HEATER) (ES43)	
						△8-733-572-15 PICTURE TUBE 07MXC3 (R) (HEATER) (ES48, ES53)	
						△8-733-573-15 PICTURE TUBE 07MXC4 (R) (HEATER) (ES61)	
						△8-733-574-15 PICTURE TUBE 07MAC2 (B) (HEATER) (ES43)	
						△8-733-575-15 PICTURE TUBE 07MAC3 (B) (HEATER) (ES48, ES53)	
						△8-733-576-15 PICTURE TUBE 07MAC4 (B) (HEATER) (ES61)	

T6001	△1-431-493-11	TRANSFORMER, LINE FILTER (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)					
T6001	△1-424-505-11	TRANSFORMER, LINE FILTER (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)					
T6002	△1-431-493-11	TRANSFORMER, LINE FILTER (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)					
T6002	△1-424-505-11	TRANSFORMER, LINE FILTER (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)					
T6003	△1-431-445-11	TRANSFORMER, CONVERTER (PFT) (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)					
T6004	△1-435-443-11	TRANSFORMER, CONVERTER (PIT)					
T6005	△1-435-445-11	TRANSFORMER, CONVERTER (PIT)					
T6100	△1-435-444-11	TRANSFORMER, STAND-BY (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)					
T6100	△1-433-844-11	TRANSFORMER, CONVERTER (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)					

The components identified by shading
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Replace only with part number specified.

KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1 RM-961

REF.NO.	PART NO.	DESCRIPTION	REMARK
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ACCESSORIES AND PACKING MATERIALS

- | | | | |
|--|--------------------------|---|--|
| | $\triangle$ 1-569-008-11 | ADAPTOR, CONVERSION 2P
(ES43ME1/MN1, ES48ME1/MN1,
ES53ME1/MN1, ES61ME1/MN1) | |
| | * 4-029-168-01 | BAG, PROTECTION (ES43) | |
| | * 4-030-895-01 | JOINT | |
| | * 4-041-423-11 | SHEET, PROTECTION (ES43, ES48) | |
| | * 4-055-672-01 | BAG, PROTECTION (ES53) | |
| | * 4-055-673-01 | SHEET, PROTECTION (ES53,ES61) | |
| | * 4-059-461-01 | BAG, PROTECTION (ES61) | |
| | * 4-060-976-01 | BAG, PROTECTION (ES48) | |
| | * 4-069-899-01 | TRAY(ES48) | |
| | * 4-069-900-02 | BOARD, TOP (ES48) | |
| | * 4-069-901-01 | BOARD, BOTTOM (ES48) | |
| | * 4-069-994-01 | TRAY(ES53) | |
| | * 4-069-995-01 | BOARD, TOP (ES53) | |
| | * 4-069-996-01 | BOARD, BOTTOM (ES53) | |
| | * 4-071-930-01 | TRAY(ES61) | |
| | * 4-071-931-01 | BOARD, TOP (ES61) | |
| | * 4-071-932-01 | BOARD, BOTTOM (ES61) | |
| | * 4-071-933-01 | CUSHION (UPPER) (ASSY) (ES61) | |
| | * 4-071-934-01 | CUSHION (LOWER) (ASSY) (ES61) | |
| | * 4-076-536-01 | TRAY(ES43) | |
| | * 4-076-537-01 | INDIVIDUAL CARTON (ES43) | |
| | * 4-076-538-01 | CUSHION (UPPER) (ASSY) (ES43) | |
| | * 4-076-539-01 | CUSHION (LOWER) (ASSY) (ES43) | |
| | 4-076-694-11 | MANUAL, INSTRUCTION
(ENGLISH, FRENCH, CHINESE,
PERUSSIAN, ARABIC) | |
| | * 4-076-803-01 | INDIVIDUAL CARTON (ES48) | |
| | * 4-076-804-01 | CUSHION (UPPER) (ASSY) (ES48) | |
| | * 4-076-805-01 | CUSHION (LOWER) (ASSY) (ES48) | |
| | * 4-077-770-01 | INDIVIDUAL CARTON (ES53) | |
| | * 4-077-771-01 | CUSHION (UPPER) (ASSY) (ES53) | |
| | * 4-077-772-01 | CUSHION (LOWER) (ASSY) (ES53) | |
| | * 4-077-862-01 | INDIVIDUAL CARTON (ES61) | |

REMOTE COMMANDER

- | | | | |
|--|--------------|-----------------------------|--|
| | 1-476-170-11 | REMOTE COMMANDER (RM-961) | |
| | 4-978-977-01 | COVER, BATTERY (for RM-961) | |

KP-ES43HK1/ME1/MN1/SN1, ES48HK1/ME1/MN1/SN1,
ES53HK1/ME1/MN1/SN1, ES61HK1/ME1/MN1/SN1 RM-961